

ON COPPER SMELTING.

In last week's Journal we published Dr. HYDE CLARKE's interesting paper on this subject, as read at the Society of Arts, and now append the discussion which ensued:—

Mr. CHARLES LOW said the subject of copper smelting is a most important one, as it embraces one of our largest manufacturing interests, and of all others it is a manufacture that has had the fewest improvements carried out since its first commencement than any other in this progressive country,—in fact, it may be said that since its first introduction little or no permanent improvements have been effected. This arises principally from two causes,—the first of which is, the copper smelting business is a complete monopoly, in the hands of about 10 individuals, who rule the trade, as regards the prices to be paid for copper ores and other matters, exactly as they think proper, and who are also extremely adverse to any kind of improvements being introduced into the manufacture of copper, and would throw every possible impediment in the way of such being carried out. The next difficulty is that although most important discoveries may be made in the laboratory, it is frequently the case that it would not be possible to carry them out in the large way, from the expense attending the process, or the impossibility of obtaining any permission to obtain the use of works to make the trials. It must be also borne in mind that the material to be operated upon is of great bulk, the matrix or gangue of the ores being so out of all proportion when compared to the quantity of metallic copper produced. The average produce of copper ores produced from English mines does not exceed 6½ per cent., and when the produce of the foreign copper ores imported into this country is added to it, the produce of the whole will not quite average 10 per cent., so that for every ton of fine copper produced at least 10 tons of ores must be smelted. From this it is obvious that to treat such a vast bulk of materials the cheapest possible process must be adopted. From a description of the present process of copper smelting in the paper just read, it appears to be as nearly as possible the same as was carried on at one of the earliest copper smelting works, erected at Bristol upwards of 100 years ago. The ores are submitted to from seven to ten different processes, from the time they are first placed in the calcining furnace until they are produced from the refinery in the shape of fine copper, and this occupies ten days. Now, to carry out this long process it is obvious that the cost of coals, labour, wear and tear of furnaces, and other matters, is very great, and any improvement that would tend to shorten this is most important. Some attempts have been made for the reduction of copper ores by what is called the wet way,—namely, by means of acids; but this has failed from the cause I have just named, the bulk of materials to operate upon being so great, and consequently, rendering the process too expensive. Having had much experience in metallurgy, and particularly copper smelting, I was induced to go into the matter very closely; and after ascertaining the exact effect required to be produced upon copper ores by submitting them to the present protracted mode of operation, then to ascertain whether some other method could not be used by means of the application of proper fluxes to effect the same object, and more economically. In the first place, what is the effect intended to be produced by the present method of smelting? It is chiefly to desulphurise the ores, and deprive them of the iron contained in them by oxidation. Well, this, as at present effected, is simply by heat, and carried out by means of a series of expensive processes. After much research, I discovered a plan of operations which completely obviated the difficulty, and for which process I obtained patents. The process I adopt is as follows:—I first calcine the ores in the ordinary way, and then introduce them, likewise in the ordinary mode, into a reverberatory smelting furnace and smelt them, and after skimming off the slags run out the metal into sand beds (not into water, as just mentioned in the paper read, which is useless). The metal I have now produced is a regulus. This I place in another reverberatory furnace, which is constructed with orifices on each side of the bridge of the furnace, to admit a current of air (for this improvement I also have a patent); the current of air passes between the flame and the surface of the melted metal, and impinges upon the latter, and greatly assists in the operation. I now introduce my fluxes, which consist of certain proportions of manganese, plumbago, carbon, and saltpetre, and the effect produced is that the iron, sulphur, and other substances are oxidised. The copper is set free and brought into a metallic state, and at the end of 12 hours is fit for the refinery, so that it enables me by this process to produce the finest copper in 36 hours, which by the ordinary process of copper smelting cannot be effected under ten days. The saving by this process of coal, labour, and other matters, must be obvious to all. The full particulars of my process, with ample directions how to carry it out, will be found in my specification of the patents at the time they were taken out. I should wish you to understand that my description of the process is not merely theoretical, but was carried out by me upon a very large scale, and many thousands of tons of fine copper made by it. In conjunction with a party of friends, I erected large copper works near Swansea, and fully carried out the process, and it was found that the copper produced was of unequalled quality, and sold in the market 2½ or 3½ per cent higher than the finest copper produced elsewhere, and the cost of smelting the copper ores by this process was 50 per cent. less than by the ordinary method. I need not inform you that our success brought upon us the opposition of the monopolists, and every attempt was made to drive us out of the trade, and of course at last with success. The price of copper was lowered to an unprecedented extent, and the price of ores raised, so that it was quite impossible to continue our operations, except at a loss; and in order to prevent our losing the whole of our capital in a useless competition with those who could afford to lose for the time 20 times the amount, and afterwards make the miner pay for it, we determined upon discontinuing operations, but not until the question had been fully proved, and the success of the process completely established. I mention the fact of the success of this improvement more for the purpose of showing how much may be done towards a cheap production of copper; and I believe it to be but a small step towards further chemical discoveries to effect far greater successes. I cannot help remarking upon the lamentable position in which one of our most important industrial and commercial interests is placed by the existence of this most monstrous monopoly,—namely, our mining interests, with their large capital invested, and considerable risk, as there always must be, attendant upon mining operations, and when successful that they should not receive a proper remuneration for their labours, but be at the mercy of certain parties to give them any price they may think proper for their ores. According to a calculation I have just made, I find that the profit made by the copper smelter upon every ton of fine copper produced is 40%, after paying all charges; and as the quantity of fine copper produced in this country per annum exceeds 30,000 tons, I leave you to calculate the princely revenue that accrues to the monopoly. But there is a remedy that could easily be adopted to meet the difficulty. Let a few influential miners combine to smelt their own ores by a cheap process, either in Cornwall or elsewhere, and the monopoly would soon be at an end. The smelters would still have ample profits, and the miner receive a proper and just remuneration for his outlay of capital and perseverance.

Mr. J. ARTHUR PHILLIPS, having been requested by the Chairman to give some information relative to the various humid processes employed for treating copper ores, remarked that the most simple practical method with which he was acquainted for obtaining copper from its solutions was that employed at Rio Tinto, in Spain, the Parys Mountain, in the Island of Anglesea, and some other places. In these localities the water issuing from the mines becomes, by the oxidation of copper pyrites contained in the veins, more or less charged with sulphate of copper, from which the metal is obtained by the introduction of scrap iron into reservoirs containing the cupreous waters. By this means the metallic copper is precipitated, and sulphate of iron formed—the former being collected for subsequent metallurgical treatment, whilst the latter is usually allowed to escape as a waste product. The poorer sulphides of copper are also frequently oxidised by calcination in heaps, and the sulphate of copper formed, after being removed from the associated insoluble matters by lixiviation, and treated as above described. The Sinding process was invented by Mons. Sinding, a Norwegian copper smelter, in order to supersede the use of iron for precipitating copper in the treatment of poor ores by the wet way, in cases where fuel for smelting is scarce, and a suitable proportion of rich ore is not at hand, as happens in Norway, the Island of Anglesea, and in some other localities. This invention consists in a new way of preparing sulphuretted hydrogen, by means of which the copper is precipitated as a pure sulphide. The method of roasting and washing out of the ores is the same in Sinding's process as in the old methods of making cement copper, as in Bankart's and other processes. Sulphuretted hydrogen is made from fuel and ordinary munda. The fuel may be any that will give off hydrocarbon gas when distilled. The reaction that takes place is between sul-

phur vapour from the munda and hydro-carbon gases from the fuel. When these are brought in contact with each other at a low red heat the hydrogen combines with the sulphur, and the carbon is deposited as a fine black powder. The furnace for making the gas consists of two divisions. The first, a deep square chamber, where the fuel is distilled, is about 2 ft. square and 8 ft. deep, and at the bottom has a blast-pipe, by which air is blown in. The top of this chamber, or gas-generator, as it is called, is covered by an iron box, with a sliding top and bottom, by which fuel is introduced, without allowing any escape of gas. Sinding's original generator was more complicated, having the blast-pipe high up, and the lower part of the generator smaller than the upper, in order to make the fire burn downwards. This apparatus was for wood; for coal the simpler arrangement first described is used. The generator communicates with the second chamber by a short horizontal canal in the upper part of the generator, and in this air is mixed with the gas in regulated quantities by means of a blast-pipe with stop-cocks. The second chamber, which contains the munda, is nearly a cube, about 8 ft. each way, the roof being slightly arched. This chamber has openings in the bottom, by which the gas formed passes off to the precipitation chambers. These openings are covered by a brick roof, to keep the munda from filling them. There are also openings at the two sides of this chamber for drawing out the spent munda, and one in the end for charging fresh sulphide. The furnace is worked as follows:—The generator is filled with fuel and lighted. The blast coming in at the bottom supports combustion, and the carbonic acid formed is reduced in passing up through the column of fuel. The fresh fuel on the top is distilled by the hot gases passing through it, and gives off hydro-carbon gases. The gas that passes off from the generator is a mixture of carbonic oxide and hydro-carbon gases. On meeting with the blast in the canal, a portion of the gas is burnt, and it is essential that only a part of it should be consumed, the object being to get sufficient heat to distil sulphur from the munda, but, at the same time, to leave sufficient gas unburnt to form sulphuretted hydrogen. By regulating the blasts in the generator and canal, the munda chamber is filled with a sheet of flame, so smoky as to give little or no light. By this means the munda is heated to low redness, sulphur distils off, and the smell soon indicates that sulphuretted hydrogen is present in large quantities: 1 ton of munda should give about 5 cwt. of sulphuretted hydrogen gas. The munda used in the furnace may be that from which the copper is obtained, since it is not wasted in the manufacture of the gas, but rather prepared for the process of roasting. The precipitation of copper is conducted in an air-tight wooden chamber, divided into compartments, so that the gas which enters at one end must pass in a zigzag direction through the whole chamber. The top is formed by a tank, into which the solution of copper is pumped. The bottom of this tank is pierced with small holes, by which the solution trickles through the gas, and there becomes blackened and thickened by precipitated sulphide. The solution now runs out at the bottom, and is again pumped up, and so on until the precipitation is complete. It is then run off into pits, where it settles; the clear liquor is let off, and the precipitate dried. This is run down in a furnace, and gives a regulus yielding 70 per cent. of copper, and from which fine copper can be made in one operation. The solution usually contains iron, and, consequently, should not be much exposed to the air previously to precipitation, as the iron salt becomes peroxidised, and much gas is wasted in reducing it to the state of protoxide. This process has been in successful operation for some five years near Faldra, in Norway, and yields a handsome profit. At Linz, on the Rhine, the poorer sulphides of copper, containing from 1 to 5 per cent. of that metal, are treated by the following process:—The ores coming directly from the mine, and without any preliminary dressing, are first roasted in a double-soled furnace, and then taken to a series of tanks sunk in the ground, and lined with basalt. These tanks are also provided with a double bottom, likewise formed of basalt, so arranged as to make a sort of permeable diaphragm, and on this is placed the roasted ore, taking care that the coarser fragments are charged first, whilst the finer particles are laid upon them. The cavity thus formed between the bottom of the tank and the diaphragm, or false bottom, is connected by means of proper flues, with a series of oblong retorts, through each of which a current of air is made to pass from a ventilator, or pair of large bellows, set in motion by steam or water-power. In order to use this apparatus, a quantity of ore is roasted in the reverberatory furnace, and subsequently placed in the tanks, taking care that the first layer shall be in a coarser state of division than those which succeed it. The retorts, which are formed of fire-tiles, and about 6 in. in height by 1 ft. in width and 6 ft. in length, are now brought to a red heat, charged with blende, and the blast applied. The sulphurous acid thus formed is forced by the draught through the flues, where it becomes mixed with nitrous fumes, obtained from a mixture of nitrate of soda and sulphuric acid, and ultimately passes into the chambers beneath the diaphragms, on which are laid the roasted ores, which must be previously damped by the addition of a little water, of which a small quantity is also placed in the bottoms of the tanks. The sulphuric acid thus generated attacks the oxide of copper formed during the preliminary roasting, giving rise to the production of sulphate of copper, which percolates through the basaltic diaphragm into the reservoir beneath. The liquors which thus accumulate are from time to time distributed over the surface of the ore, until the greater portion of the copper is extracted, when, by shifting the damper, the gases are conducted into another tank, similarly arranged. The liquors from the first basin are now pumped into the second, and the operation continued until the ores which it contains have ceased to be acted on by the acid. When sufficiently saturated, the liquors are drawn off into convenient troughs, and the copper precipitated by means of scrap iron. The sulphate of iron thus formed is subsequently crystallised out, and packed into casks for sale. On removing the attacked ores from the tank, the finer or upper portions are thrown away as entirely exhausted, nearly the whole of the copper having been removed from them, whilst the coarser fragments are crushed and re-roasted, and finally form the upper stratum in a subsequent operation. It has been found that, by operating in this way, ores yielding only one per cent. of copper may be treated with considerable advantage, since the sulphate of iron produced, and the increased value of the roasted blende, are alone sufficient to cover the expenses of the operation. At a short distance from the village of Twista, in the Waldeck, several considerable beds of sandstone, with green carbonate of copper, have been long known to exist. Although varying considerably in its produce, this ore, on an average, yields 2 per cent. of copper, and was formerly raised and smelted in large quantities; but this method of treatment not having, apparently, produced satisfactory results, the operations were ultimately abandoned. The insoluble nature of the granular quartzitic gangue, with which the copper is associated, suggested, some three years since, to Mr. Rhodius, of the Linz Metallurgic Works, the possibility of treating these ores by means of hydrochloric acid, and a large establishment for this purpose has ultimately been the result. These works consist of a crushing-mill, for the reduction of the cupreous sandstone to a small size, sixteen dissolving tubs, and a considerable number of tanks and reservoirs for the reception of the copper liquors, and the precipitation of the metal by means of scrap iron. Each of the sixteen dissolving tubs is 13 feet in diameter and 4 feet in depth, and furnished with a large wooden revolving agitator, set in motion by a run of overhead shafting in connection with a powerful water-wheel. This arrangement admits of the daily treatment of 20 tons of ore, and the consequent production of from 7 to 8 cwt. of copper. Each operation is completed in 24 hours, the liquor being removed from the tanks to the precipitating trough by the aid of wooden pumps. The ore is stopped and brought into the works at 4s. per ton. The acid employed at Twista is obtained from the alkali works in the neighbourhood of Frankfurt, contains 16 per cent. of real acid, and costs, delivered at the works, 2s. per 100 lbs. Each ton of sandstone requires 400 lbs. of acid, which is diluted with water down to 10 per cent. before being added to the ore. Every ton of copper precipitated requires 1½ ton of scrap iron, at 4½ 5s. per ton. It is probable that this extremely simple process of treating the poorer carbonates and oxides of copper may be practicable in many other localities; but in order to be enabled to do so with advantage, it is necessary that the ore should be obtainable in large quantities, at a cheap rate, and that it should contain but little lime, or any other substance than the ores of copper soluble in dilute hydrochloric acid. It is also essential that the mine should be in the vicinity of alkali works, in order that a supply of acid may be obtained at a cheap rate, and also that scrap iron be procured in sufficient quantities, and at a moderate price. In conclusion, Mr. Phillips also described and made some observations on the large deposits of black sulphide of copper which have been recently discovered in Tennessee and Virginia, United States of America, and expressed an opinion that they were the result of decompositions of a secondary nature, which were, in all probability, still actively progressing. Mr. Phillips further observed, that Capt. J. R. Pill, who had had better opportunities of making himself acquainted with these formations than almost any other equally competent person, was the first to discover the escape of sulphuretted hydrogen from

these deposits, and that he (Capt. Pill) fully concurred in the opinion that they were the result of the decomposition of the salts of copper through the agency of that gas.

Mr. MURCHISON said that he was not connected with the copper smelting trade, but he knew enough of the subject to perceive that Mr. Clarke had brought it before the Society in an able and lucid manner. Mr. Clarke made a remark which it was important to find confirmed by an extensive copper smelter who had spoken this evening. He said that copper smelting was at present a routine work, pursued on much the same plan as of old, and on the same general system in most of our works, followed out as a mechanical practice rather than as a scientific occupation. (He Mr. M.) remembered reading an article on free trade in a public journal a few years ago, in which the writer expressed an opinion that the time was not far distant when a protectionist would be so rare and curious a creature, that if one were then met with, his appropriate place of residence would be the British Museum. He feared that the writer of that remark forgot the copper smelter, who had adhered to the antiquated plan of carrying on his trade, regardless of the improvements which the encouragement and advancement of science had enabled other manufacturers to bring their articles to that degree of perfection which had raised the commercial position of this country to its present pinnacle of greatness. It was about the year 1708 that the first piece of copper was made in Cornwall, at a place called St. Austell, by Sir Talbot Clark, and two other gentlemen. It was not till about 1725 that the copper mines in that county began to return any quantity of ore, being in that year, probably, about 5000 tons. In 1750, the quantity had increased to about 10,000 tons of ore. In 1754, copper smelting works were erected in the parish of Camborne by Sampson Swaine and others, and these were subsequently removed to the neighbourhood of Falmouth. They met with much opposition, but overcame it and flourished. Other attempts were made to establish works, which failed more from want of capital, bad management, and improper situations, than from the means and cost of obtaining fuel. In 1800, the produce of the Cornish copper mines had increased to about 56,000 tons of ore; and they were now (together with that for Devon) about 190,000 tons. Mr. Clarke had remarked that the working of the Cornish mines might be threatened by the importations of rich ores from Chili and Australia; but the fact was that the British mines had been greatly falling off lately in their production of copper. In 1857, the Cornish and Devon mines yielded 1346 tons of fine copper less than in 1856; and in the first nine months of 1858, about 450 tons less than in the corresponding period of 1857. This was not caused by the British mines being forced to return only their richest ores, for the average produce of the sales had been declining,—in 1850, it was 7½; in 1853, 6½; and, in 1858, 6½ per cent. The British and foreign ores sold at Swansea in 1853 amounted to 29,244 tons of ore, of 14½ per cent. giving 4362 tons of fine copper; and in the year ending June 30, 1853, 36,691 tons of ore were sold, of the average produce of 14½, and yielding 5240 tons of fine copper, showing an increase of 878 tons of fine copper. A gentleman who had spoken had remarked that he believed the mines would do well if they smelted their own ores. About 100 years ago the largest copper mine then opened in Cornwall not only calcined its poor ore, but also smelted it into regulus. But this was soon stopped, for the ore buyers would not give them so high a standard as they did to others, in order to discourage them; and because it deprived them of part of their profit. From Cornwall the smelting trade was carried to Bristol, but the double carriage of the ore and the fuel to that place soon took it to Wales, where it was established at Swansea and Neath. Mr. Murchison then remarked that he had been a member of the Society for many years, and could say that Mr. Clarke's paper was one of the most practical and useful that had been brought before it. He hoped it would lead to a thorough consideration of the subject, and that the Society would be induced to encourage practical men to suggest improvements in the process or processes of copper smelting. Mr. Murchison concluded by moving the thanks of the Society to Mr. Clarke for his able paper.

[We shall next week give the speeches of Mr. John Bethell, Mr. P. L. Simmonds, Sir T. Phillips (Chairman), and the reply of Dr. Hyde Clarke.]

MINING IN IRELAND—ROUGH NOTES.—No. VI.

Having commenced our journey at Bantry, and returned to it again, we now proceed with a description of our route across the Priest's Leap into Kerry, which, with a small portion of the county Cork, forms the southwestern extremity of Ireland. The drive from Bantry round the head of the bay, which is deeply indented, is pleasant and interesting, and the tourist who likes walking exercise will find a short cut into Kerry by crossing the mountain known as the Priest's Leap, from the top of which there is a magnificent view of Bantry Bay, the Kenmare River, and the mountains of Mangerton and MacGilly Cuddy's Reeks, the highest mountain in Ireland, it being 3410 ft. above the sea level. The Priest's Leap divides the counties of Cork and Kerry, and, according to tradition, St. Feockna, an Irish priest, some hundreds of years ago, in the 5th century, it is said, when being pursued and driven by his persecutors out of Kerry, was nearly overtaken on the top of the Esk Mountain, and in order to escape from his enemies performed a miracle, by making the male which he rode leap from the Esk Mountain to within a mile of Bantry—a distance as a crow would fly of ten miles. Hence the origin of the name of the Priest's Leap. St. Feockna, it appears, a few days previously to his being driven out of Kerry, was applied to by a farmer, who resided at the north side of the Esk Mountain, to prevent a woman, his near neighbour, from stealing his milk and butter; and as she would not desist from her dishonest practice, the saint, by a miracle, turned the milk, churn, and rolls of butter into stone, which our guide pointed out to us, stating the same time that this wicked woman was turned into a pillar of rock, and the stick she held in her hand, by the same process, was converted into a whitethorn tree. The pillar and tree may now be seen near the ruins of an old church, dedicated to the memory of St. Feockna. The country people to this day believe that any person attempting to remove one of the rolls of butter would be immediately struck blind. We saw, however, the rolls of butter taken away, and, if we are not mistaken, they may now be seen in the Museum of Trinity College, Dublin, and we believe the authors of the sacrifice have not yet lost their sight. Similar traditions were at a remote period of history current in the south-west of England, and near Liskeard are three circles, very near each other, formed by erect stones placed at some distance. Popular superstition has attached to this monument a legend that the blacks were once made to transform into stone as a punishment for engaging in the sport of hurling on the Lord's-day; hence the name given to this monument of "The Hurlers." A similar legend is attached to a monument in the parish of St. Buryan, where nineteen maidens are said to have been turned into stone for dancing on the Lord's-day. Previous to the year 1824 the only carriage road from Kenmare to Bantry was across the "Priest's Leap," and at either side of the Esk Mountain the rise is about 1 ft. in 4. Since then, however, an excellent road has been made through the valley of Bonaue, and a tunnel 260 yards in length cut through the Esk Mountain ridge, and from thence it winds round the hill into the beautiful valley of Glenanglo, from which place place conveyances run every day from May 1 till October, to Killybegny. From the old ruins of St. Feockna's Church to Kenmare, we passed through the valley of Bonaue, and close by a river of the same name. In this river the disciples of Isaac Walton may find plenty of amusement, as it abounds in salmon and trout of the finest description. The coast of Kerry, which is bordered by the Atlantic, is deeply indented by the estuary of the Kenmare River and the Bay of Dingle, which penetrate into the mainland about 30 miles in an easterly direction. The peninsula intercepted between the arms of the sea are occupied by the western extremities of the mountain system, which, commencing in the County of Waterford, extends with little interruption across the entire south of Ireland. The mountains of Bear and Bantry, spreading from the south-western boundary of Cork across the south of Kerry, occupy the district between Bantry Bay, the river of Kenmare, and Dingle. At the head of the River Kenmare, which is in fact an arm of the sea, is a long and narrow valley, which is watered by the Roughy, the most considerable stream that falls into the Kenmare estuary. The town of Kenmare is situated at the lower extremity of this valley in a fertile tract, from which the Glanarriff Mountains rise to the south side towards Cork, and the group of mountains known as the Mountains of Waterford, extends to the north. A short distance south of the town, the River Roughy, at Nilsen Sound, is crossed by a handsome suspension bridge, towards the erection of which the Marquis of Eglarshyne contributed £3000. The Marquis also contributed largely in building a good pier at the head of the harbour, alongside of which vessels of 250 tons can load or discharge their cargoes free of any charge. The scenery about Kenmare, and on the banks of the Roughy, is very beautiful; the locality is well wooded, and numerous tasteful villas on each side of the river complete a diversified and charming picture.

The geological structure of the chief mountain chains we have alluded to is similar to that of the mountains in the west of Cork, the main components being grey and red clay-slate, large quantities of quartz, and overlaid in the low districts by beds of limestone. The Roughy Valley, which is about twelve miles in length, and varying in breadth from half to one mile, is composed of compact slaty-form limestone; it has a vitreous fracture, with a slight dip towards the south, but we could discover no traces of marine shells or remains; we found abundant tracts of galena in the limestone, also remains of extensive ancient works. Iron and copper mines have also been worked since a remote period in this locality; and Glanarriff, which forms part of this valley, as appears by some verses in Senatus, has been celebrated for its mines since the ninth century. The works, however, appear to have been of a superficial character, and although the openings are of some miles in extent in an east and west direction, yet the excavations do not appear to have been made to any great depth, owing probably to a want of the knowledge of machinery. The Roughy in this direction is fed by many large tributary streams, and water-power, we fancy, may be applied to an unlimited extent in the development of those ancient mines. The geologist, the antiquarian, and the capitalist, may find ample scope for their several pursuits in the Roughy Valley; the former, we presume, would find objects of a highly interesting nature, and the latter would, no doubt, find something in which he might safely and profitably invest his money.

CURIOUS CALCULATION.—The amount of coal raised annually in Great Britain is 68,000,000 tons. Now if they were extracted from a mine 6 ft. high, and the place driven 12 ft. wide, the excavation would be 5128 miles 1090 yards in gallery extent. Or if formed into a solid globe the diameter would be 1549 ft. Or if piled into a square pyramid whose base was 40 acres, or equal to four times the area of Whitehaven cemetery, they would reach to the enormous height of 8356 914 ft.—J. ELLWOOD, collier, Moss Pit, near Whitehaven: *Whitehaven Herald*.

PRACTICAL MINING—SYPHONS.

THE SAN FERNANDO COPPER MINES, CUBA.

THE AUSTRALIAN AND NEW ZEALAND COMPANIES.

[illegible]

AUSTRALIAN MINING COMPANIES.

THE PNEUMATIC IRON AND STEEL PROCESS.

THE PNEUMATIC IRON AND STEEL PROCESS

prospects than this union of—
BESSEMER, MARTIN, AND CO.?
Sheffield, Dec. 6.

THE RIVAL STEELMAKERS.

MANUFACTURE OF STEEL.

SIR,—“One Interested” had, I think, better inform himself as to the merits of the various processes and of their respective expenses, before he proceeds to further out the

MANUFACTURE OF STEEL.

STEAM-BOILERS—HOW TO PREVENT EXPLOSIONS.

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Another cause is the inadequate means of exit for the sudden accumulation or generation of gas or steam in boilers. Take, for instance, a 6-in. safety-valve, a very common size in our iron-works, the means of escape is only round the periphery of the valve and barely equal to one-third of the area of the valve. It is well known to the practical engineer that the safety-valve, of its own accord, rarely under any emergency (short an explosion), rises more than half an inch, which is barely equal to one-third of

SMELTING v. MINING.

OBSTRUCTIONS AND ANNOYANCES TO MINERS BY AGRICULTURISTS.

OBSTRUCTIONS AND ANNOYANCES TO MINERS BY AGRICULTURISTS.

Not long since a fellow who rented a little corn-mill at 15¢ per year, the stream engine playing like was nearly dry for three months out of it, when by our heavy engine throwing so much water into it he could continue work, even in the driest times, to his great advantage, came on me for the mill, and I thought, for damages done to his water-wheel, as well as at what cost he took care to cut off the add'l water from the mill, I would offer it at defiance. It being summer time, the clown, two days after, cried *pécunié*, and actually offered to pay 5¢. to have the water restored, which I, of course, refused. Oh, farmer-folk, oh, landlords! oppress not the minor; he is your best customer—your best friend. Remember—*Eat of Oppress, If Land, Deal.*

GEO. H. BAKER.

WHEAL EMMA.

There is not, says Mr. Ennor, in another number of your valuable journal, a person who is engaged in making any piece of machinery, not even a common horse-wheel. After such a statement you would not look for model plans and model machinery. Wheel Emma, and yet this very Mr. Ennor paid a visit to the mine, with a person who was supposed to be his engineer, to copy the machinery for dressing ores, but he took precaution of going at night, when he supposed he would not be seen. In this, however, he was mistaken, for Capt. Goldsworthy, ever at his post, aided Mr. Ennor with a letter to arrive at a knowledge of its construction. It is unfortunate for the public that

Enmor made choice of such an hour to visit the mine for such an object, for had he come in contact with Mr. Knight, the inventor, it is not unlikely that he would have received a chastisement which he would have remembered with the remainder of his life, when departing from the truth in his communications to your Journal; and if no other good resulted from it, most likely your subscribers would be saved the pain of reading and commenting upon such conflicting remarks as those which have recently appeared in connection with cross-cores, mines, and quarries, with the name of N. Enmor attached. The explanation that Mr. Enmor has given on the subject of the Wheel Emma cross-core has left everyone in doubt as to what object he had in view. His silence, therefore, upon the subject, after the clear manner in which "Veritas" brought under view his contradictory statements, is perplexing, and although "One who can feel Another," writing in your Journal of Nov. 27, has commented upon the "off-handed remarks of Mr. Hitchins," he does not relieve Mr. Enmor from the dilemma into which he has fallen, of making statements calculated to mislead those who are too ignorant of mining matters to advocate their own cause.—*Backfistleigh.*

THE SELECTION OF MINES.

Sir,—I cannot conceive from anything that appeared in my last letter how Captain Seymour has come to the conclusion that he had given "offence" to your correspondent, "Young Cornwall." Neither can I discover in that letter that I said I was a young geologist, or that I had referred him to Carn Breu Mines. I did refer him to the Carn Breu district, without naming any particular mine, because he made a general sweep of the county; but to enumerate all those rich mines situated in the position he condemns would fill a large space in your valuable Journal, to no profitable purpose, as your correspondent, "Mine Agent," has referred to so many instances throughout the county. I again quote Capt. Seymour's own words in referring to the position of the mine:—"It is likely that lodes may present favourable indications in this position near the surface, but I have never witnessed one that has produced much copper." I find that the best position for a copper mine is south-east (from the hill), next to that east or south. In these three points are nearly all the richest mines in the county, &c. Now, this declaration from Capt. Seymour leaves but little room for the exceptions (in regard to "copper mines") now brought forward, and I most candidly declare that I desire from him that information which forms the groundwork of those statements which I quoted in my last letter, particularly as he has now declared himself "an old practical geologist," let Mr. Howwood say what he may to the contrary.

That I am a practical miner he may discover by my last letter, and hope that my darkness (not as a theorist) may be dispelled by further communications from him in answer to that letter, for I declare that to trace back the *Mining Journal* for the last seven years in search of the writings and opinions of Captain Seymour (who has been pleased to term himself "an old practical geologist") respecting lodes, minerals, &c., must be a tedious task, which offers but little encouragement; especially as that seven years' labour (to judge from his late production) has been so productive of vague delusions. Yet, may I presume to hope that when he gives the information required that the force of practical knowledge may convince me of the erroneousness of the ideas I may have conceived previously respecting such matters; I, therefore, am open to conviction, and being one of a class of young men that desire to profit by the experience of our elders in the art of mining, I claim the indulgence of Capt. Seymour, and beg to subscribe myself again—

GREAT WHEEL VOR.

Sir,—The following statement of the quantity of ore raised by the old adventurers from this mine during the last six months, before the works were given up in July, 1846, may probably interest some of your readers. It is taken from the books of the mine, and gives good reason for believing that the small returns at present obtained from the mine are due to an accidental falling off of the lode, which may be reasonably expected to recover itself shortly:—

	Tons c. q. lbs.
January, 1846	56 7 1
February "	48 19 2 23
March "	48 19 2 11
April "	71 4 0 11
May "	56 16 2 19
June "	51 17 2 17
July "	46 5 1 13
Total	380 11 3 19
Average for seven months	54 7 1 18

Dec. 9.

CAMEL QUARRY.

Sir,—Mr. Enmor must surely have known otherwise when stating that tram-wheels were attached to the wagons drawing the stuff out of the pit; and, if he wish it, Mr. Oatey will readily corroborate the statement of Captain Maylor to the contrary. Mr. Enmor, being once satisfied on this, will, I have no doubt, at once acknowledge his error. It will be quite unnecessary to reply to the portions of his letter, in which the public can have no interest. The only matter in which, in my opinion, they have any concern is that one quarry is opened by a company who have the full power of working out their original intentions of opening up and carrying forward its necessary operations, even if the expenses in relation thereto have been far heavier than first anticipated. Mr. Enmor's original report on the quarry was made by him prior to commencement of the works, and when the pit was full of water; and he then reported—"The rock risen from the quarry is fit to be converted into roofing-slate, floors, tanks, or any other purpose that slate is used for—its colour being a little darker than most Cornish slates, but very pretty appearance; and, taking the nature of the rock, and the favourable position of the property into account, I state, without fear of contradiction, that this quarry presents every indication of proving more than an ordinary profitable investment for capital." His late statements, in your Journal and elsewhere, that the quarry was a fourth-rate one, and would never pay, &c., were made in spite, in consequence of a letter from Mr. Gilbert Forester in regard to Penzance Mine, and without having visited the quarry for a considerable time, and when he had never seen the discovery made a few weeks since; so I think the opinions thus given cannot be of service to any one. In regard to the remarks of "T. A. Y.," I would only observe that many meetings, both in the Cornish and Devonian States, have not been extensively before the public until within the last 20 years, although stated to be worked for centuries. But it is intended that the Camel Quarry shall be worked in a more enterprising manner, and at a greater and less expensive rate. Our townsmen, Mr. Forester's, enquiries will now take so much of Mr. Enmor's time that I presume we shall be passed over.

Wadebridge, Dec. 8.

ONE OF THE CAMEL QUARRY SHAREHOLDERS.

[ADVERTISEMENT.]

THE NEWTOWARDS MINES.

Sir,—In reference to the discovery in these mines, whether by Richard Rickard, as stated in his letter to the deputation of the directors (Messrs. Dumbell and Duff), which was published in your Journal of Sept. 25 last, or by Silas Evans, those gentlemen are the only persons that can decide the dispute, and I fearlessly abide their decision.

Dec. 6.

RICHARD RICKARD.

DR. MUSPRATT'S "DICTIONARY OF CHEMISTRY."

TO THE EDITOR OF THE STAFFORDSHIRE ADVERTISER.

Sir,—Permit me, through the medium of your Journal, to direct the attention of the manufacturers of pottery and porcelain in Staffordshire to a matter in which they are interested, as I believe most of them are subscribers to Dr. Muspratt's *Dictionary of Chemistry*. I am given to understand that not more than one part of that clever and splendid work will be devoted to pottery, although seven parts have been given to dyeing, and five to alcohol. Surely pottery demands as much attention as either of these. It is fair to those who subscribed solely for information on that subject, and in which chemical knowledge is of so much importance, that they should be put off? I believe the cause assigned by the publisher is that the work must be completed in a certain number of parts. But this is a very insufficient excuse to those who seek for information, and who have received volumes of forty parts without a particle of matter interesting to them. I recommend an appeal to Mr. Mackenzie, as a matter of justice, to extend the article on pottery to, at least, three parts. Hoping that this hint may have the desired effect, and apologising for intruding on your valuable space, I remain, Sir, your obedient servant—

Worcester, Nov. 25.

R. W. B.

DR. S. MUSPRATT'S "CHEMISTRY APPLIED TO THE ARTS AND MANUFACTURES."

TO THE EDITOR OF THE WESTERN DAILY PRESS.

Sir,—Having seen in the *Manchester Guardian* a letter of Prof. Calvert's, from which it appears that the publisher of Dr. S. Muspratt's *Chemistry applied to Arts and Manufactures* has expressed his intention of completing the work in seven numbers, I think it is the duty of every subscriber to express his veto on such a monstrous proceeding. The 47th number is now out, treating of paper, and the article of perfumery just commenced. When it is recollected that amongst the remaining subjects are photography, penicillin, quinine, resins, silver, soap, starch, strontian, sugar, sulphur, sulphuric acid, tartaric acid, tin, ultramarine, water, zinc, &c., it will at once strike any reflecting mind that at least twelve additional numbers are necessary to do more justice to such important matters. It would, therefore, be committing a great act of ingratitude, nay injustice, to the 40,000 subscribers to this truly national work if it should be curtailed in the proposed manner. Amongst the subjects which have been enumerated are many which have been most anxiously expected by thousands of its subscribers, many of whom were induced to take the work on the strength of those articles alone; and when we remember that dyeing occupied seven parts, alcohol five, and gas two parts, it would be only fair to these manufacturers if pottery had two or three, and soap and soda at least three parts between them. Without doubt, pottery, soda, soap, and sugar are some of the most important articles in the whole catalogue, and must be fully treated of, or the efficiency of the work will be destroyed.

W. BIRD HERIATH, M.D., F.R.S. Ed., M.R.C.S. England, 32, Old Market-street, Bristol.

Analytical Chemist, &c.

A DEARTH OF DIAMONDS.—A mercantile letter from Bahia, dated Nov. 12, per *Tanar*, gives the following important information bearing upon the import trade of that place:—"The falling off in the product of the diamond mines during the last few months is something quite alarming, when we consider the important bearing it has upon the trade of this province, and it behoves shippers of manufactured goods to give this their serious attention, and not to be led away by the present temporary demand, arising as it does, not from the Chapada, which was wont to send us good customers, but from districts far apart from that diamond-producing province."

WELSH STEAM COAL.—The *Sun* of Thursday says:—"Two engineers, one of whom was engaged in making the recent experiments on North Country coal as a steam fuel, are about to be despatched by the Admiralty to Cardiff, in order to test the value of the South Wales coals, and to obtain materials for a comparison of their merits with those of the northern coals. The report of the Admiralty engineers is understood to relate chiefly to the possibility of consuming the smoke of the bituminous coals of the North of England, and to make no reference to the relative value of the two coals. The experiments at Cardiff will embrace a wider field, and settle, it is to be hoped, definitely the disputed question of the evaporative power and general superiority of the rival coals."

MANGROVE AND NEW GRANADA.—In page 809, of last week's *Journal*, for "excess of cold over returns," read "excess of returns over cost."

Meetings of Mining Companies.

GREAT WHEEL VOR UNITED MINES.

The quarterly general meeting was held at the company's offices, Gresham House, Old Broad-street, on Wednesday, Mr. GEORGE NOAKES in the chair.

Mr. THURMAN read the notice convening the meeting, and the minutes of the last, which were confirmed.

The CHAIRMAN said that he would proceed to read the reports, and he must crave their best attention and great patience. He had a number of reports to read, and they contained matter which would call for their particular attention. Such is the position of the Great Wheel Vor Mines that on this day's decision would depend the future prosperity of the company. He then read a long series of reports from Captains Gill, Petherick, Bryant, and others; the principal being that of Capt. John Petherick, which was to the following effect:—

It was evident the alleged existence of a great extent of rich and profitably productive ground in the bottom of the mine, forming the principal if not the sole object of the present adventurers in resuming its working, was an exaggeration, and that the state of the lode in the deeper workings did not justify the expectations entertained of its great value; but the lode both east and west of Boulder shaft fully maintained its size and regularity, and a considerable portion of the slopes contained sufficient ore to yield moderately remunerative returns at the present price of tin. The lode in the 284 and in the 264 fm. levels had recently improved, the value of the end of the former level being 18s. to 20s. per fm., and there was great reason to expect that a further extension of those levels westward would lead to the discovery of a considerable extent of additional and remuneratively productive ground. In the 236 a winze had been sunk, where the lode was large, regular, and productive, yielding at present from 120s. to 150s. worth of tin per fm., and its appearance indicated that by further development an important increase of the returns would be the result. The lode in the ends of the 236 and 204 fm. levels afforded strong grounds to expect that a systematic exploration of the lode in the untried ground, east of the shaft, might lead to the discovery of valuable deposits. In the Wheel Metal, the prospects were of a decidedly favourable character, and when brought into a proper course of working would, in all probability, again become a productive and valuable mine. Treumans' lode: The 82 fm. level contained ore worth from 12s. to 15s. per fm., and was of a promising character. The extension of the levels westward, and the sinking of the engine-shaft to deeper levels, it was thought probable would lead to more valuable and important discoveries, eventually rendering this lode permanently profitable. He felt convinced that the present state of the prospects still justified the further prosecution of the mines. Two important circumstances in its favour were the present high price of tin, and the probability of its continuance; and the improved available means for drawing stuff to the surface at a comparatively cheap rate. The Old Mine ought never to have been re-opened as a commercial speculation, but as great expense had been incurred its abandonment without further trial would be unwise and suicidal. To develop the mines would incur an additional outlay of 20,000s., and it was thought a judicious expedient, that sum, in addition to the net proceeds from the mines, would bring them again into a profitable state, any at the rate of 15s. or 20s. worth, if not earlier, they might be expected to realise a net profit of at least from 20 to 30 per cent. on the amount of the additional capital required, and there was a reasonable probability of the mines becoming increasingly productive without any additional outlay of capital.

The CHAIRMAN continued: That the supplementary balance-sheet showed a balance against the mine of 261s. 14s. 9d. Their outstanding liabilities were 13,230s. 3s. 3d., against which they had arrears of call, 713s. 10s.; leaving a balance of 12,516s. 13s. 3d. to be provided for, exclusive of November cost, but including the November merchants' bills. Against this they had a plant upon which over 30,000s. had been laid out, but whether anything like this amount could be recovered he could not say, as much was underground, and would take a great deal of time to get up again; 843,007s. 19s. 1d. appears upon the capital account to this day, and the amount of the share capital was 1,000,000s. Their returns were falling off so considerably they thought it would be highly necessary to know where they were, more especially as the bottom of the mine was so different from what they were led to expect. They were likewise led to hope that the slopes were better than they had turned out. The directors instructed Capt. Gill to make a report, and seal it up, before any other inspector visited the mine. This report was made on Nov. 8.

A SHAREHOLDER enquired what gentlemen had been employed by the committee to inspect the mine? The CHAIRMAN replied Mr. Petherick alone had been employed by the committee. Mr. Bryant was Messrs. Harvey's agent, and made the inspection for them.

A SHAREHOLDER thought that the report was made to the committee.

The CHAIRMAN said, understanding that Capt. Bryant had been for some time on the mine, he requested that his report might be sent to him. He (the Chairman) suggested to the agent of Mr. Treumans that Capt. Bryant should inspect the mine, and that if they decide upon carrying on the mine they would look for some support from the lode. He (the Chairman) noted down Capt. Thomas's opinion, which was only a verbal one, as he gave it. Wheel Metal was almost worked out in the ground open, and in that quarter they would have to make a new mine. With regard to the lode mine, he knew the bottom was poor, because he inspected the mine before it stopped. He said they could never get a profit while the existing system of working was continued. They were then raising 50 tons per month. Such was Capt. Chas. Thomas's opinion. He (the Chairman) having finished the reading of the several documents, continued that with regard to their present information he had exhausted his stock. They all felt sad and disappointed with the results they had obtained, but they must still look to the future. Having expended so large a sum, there was no doubt that they had been heavily taxed—not only for money, but for patience, and a new scheme of working must be devised. However, they would consider all their former capital as irretrievably lost, and start afresh. If there were no indications of coming good, he believed every one of them would say—Do not throw away good money after bad. In the present case they would offer no advice; they would leave it to the meeting to form their opinion, and they would carry it out. If they stopped the liabilities would soon consume the plant. If they went on, they had two years to wait before they could make the Great Wheel Vor United pay, and calls to the extent of at least 30s. per share would be necessary. There were indications in the 236 fm. level that they were opening out a new shoal of tin. If that proved to be a new bank they would have a large extent of valuable ground. They also had expectations from Treumans' lode.

Mr. STODDEN enquired whether the committee made no recommendation?

The CHAIRMAN said that they offered none; but that, if they were asked for their opinion, they had no objection to express it. In going into mining speculations there could be no certainty. Their indications were good, and there were good grounds for a fair speculation for the future. It was the opinion of the committee individually that they had better go on; and he thought it probable that the holders of 15,000 shares would be of a similar opinion to themselves.

A SHAREHOLDER said that the 15,000 shares were, of course, the 26,000?

The CHAIRMAN did not assure them that 15,000 would be in favour of going on, but said that it was probable they would.

Mr. COLE said that the object of the committee was to leave everything in the hands of the shareholders, and they had, therefore, requested that proxies should not be sent to the committee, but to individual shareholders. There had been instances of directors holding proxies to carry their own view. They had tried to do the reverse, by requesting shareholders not to send proxies to them.

Mr. BOST enquired upon what grounds the circular sent to the shareholders, and dated August 17, had been drawn up?

The CHAIRMAN regretted that it had ever been sent, but assured them that he sent it with the best intention. When the mine was drained to the bottom, and a good quality ore brought up, he thought that every shareholder would, like himself, be glad to hear of their success. He, therefore, framed the circular, and submitted it to the chief captain (Capt. Gill) and his agents, and they said that there was nothing in it which they could not testify to be true.

Mr. BOST was perfectly satisfied with the explanation given—the circular was penned on the authority of Capt. Gill and his colleagues. They had since heard that part of the lode at the end of September yielded 15 lbs. of tin to the ton of stuff; and on Oct. 10 the yield had risen to 40 lbs. of tin to the ton of stuff. Now, he did not complain of Mr. Noakes having sent out the circular—he was most obliged to him—but he thought it unjustifiable that they were kept in total ignorance long after they knew the bottom of the mine to be worthless. They were never told all the time that there was anything wrong in the mine.

The CHAIRMAN said he had not kept any one in ignorance; there was no information after which he could communicate. He wrote continually to Capt. Gill for the value of the slopes, and Capt. Gill would write him the value of the tin.

Mr. Capt. Gill well knew that there was not an excellent course of tin there. Capt. Gill said that when they came down to the bottom of the mine they broke down a splendid store of tin, weighing some hundredweights. This was still at the count-house, but when they came to clear what they found that the ground was not of the same character, and he could not fix a value until he saw what they had.

Mr. BOST: You could have told us that then.

Mr. COLE thought Mr. BOST seemed to think that what had been done—that the information published was put forth to give a fictitious value to the mine. They had, during the mine working, been in the office, done the work, and given the circulation of any misstatements, and he hoped the shareholders would not tax them with any desire to do this for stock-jobbing purposes.

Mr. BOST did not say whether they did it purposely or not; he only complained that the misstatement was not corrected as soon as it was known to be incorrect. Why was not the progress they had made given in the *Mining Journal* every week?

The CHAIRMAN said that the committee had determined to publish only monthly reports in the *Mining Journal*, but as the shareholders generally disapproved of their decision, they had not persevered in it.

Mr. STODDEN stated that when he made the statement he did not guarantee its literal fulfilment. He calculated from the prospects generally. He took into consideration the probabilities. He gave the estimated average returns during the next two years. They might on one two, three, or four months, without a higher rate of produce than at present, but he gave the average.

Mr. GOODRIDGE saw nothing in Mr. Petherick's report except referring to probabilities and anticipations for the next two years to come. He thought that if they wished to come to any sound conclusions they must look at the facts of the past, and place no reliance upon captains' reports. He found that in the first year of their operations it cost them 3s. 4d. to produce 12. worth of tin; in the second year, 4s. 2d. to produce 12. worth of tin; in the third year, 2s. 13s. 3d. to produce 12. worth of tin; in the fourth year, 1s. 7s. 6d. to produce 12. worth of tin; in the fifth year, 1s. 12s. 10d. to produce 12. worth of tin; or, taking the average for the five years, they had paid 2s. 1s. 3d. for every 12. worth of tin they had obtained. During the three months ending September each 12. worth of tin had cost them 1s. 11s. 11d., and to the end of October each 12. worth of tin had cost them 1s. 13s. 9d. Even taking the most favourable portions of the mine—the only portions which had returned any profit whatever, the Wheel Metal and Flow—he found that the cost had been 18s. 19s. 4d., and he returns 110s. 224s. 16s. 8d., so that they had only even there got a profit of 92s. 6s. 11d. upon an expenditure of 104,000s. They were led to suppose that the mine contained great wealth, and that in the Vor levels they would find quantities of stuff. The returns for the first three years were to be 160,000s., calculating 45s. per ton to be obtained for the produce; and for the five years, at the same rate of calculation, the returns should amount to 400,000s. The mine ought to have produced 400,000s., and had produced 40,000s., or just one-tenth. These calculations were all based upon the best authority, but where was the "more of tin," which was to return them such immense profits? They were told that calls to the amount of 12. 10s. per share would be required, but they had no guarantee that this amount would suffice. He saw no data for Mr. Petherick's conclusions. With regard to the expenditure, they had nothing to guide them. The report contained in Mr. Noakes's circular had proved incorrect; all the captains' reports which they had hitherto read had turned out incorrect. Might they not be misled again? If he were told that the returns would be 44 tons of tin per month, whilst their present yield was only 33 tons, he thought they were entitled to some information as to how the increase was to be obtained.

Mr. STODDEN having referred to Mr. Goodridge's speech as a funeral oration upon the Great Wheel Vor Company.

Mr. GOODRIDGE continued—That had they taken his advice three years since their loss would have been less.

Mr. STODDEN said, considering the reports before them, he thought that if they spent another 20s. per share they would get a fair return upon it. He did not think that the

mines would return the original capital, but regarding the proposed outlay as a new venture, he thought they had fair prospects of success.

In reply to a question from a shareholder, Mr. PETHERICK stated that the observation as to the injudicious mode of working did not apply to the present mode.

Mr. JENNINGS remarked that there was a difficulty in getting in the last call, and wished to know whether any course could be suggested to compel the calls to be more promptly met?

A SHAREHOLDER enquired what the amount of calls in arrears was?

The CHAIRMAN said that the arrears of call was 713s. 10s.; this was referred to all the calls that had ever been made on the mine since the existence of the present company.

Mr. COLE said that of the 700s. arrears there was from 150s. to 200s. due on 11. shares, which had never been brought in for registration.

It was then resolved that the reports and accounts be received and adopted, and that they be printed and circulated amongst the shareholders.

Mr. STODDEN proposed that a call of 10s. per share be made, payable forthwith.

The CHAIRMAN remarked that if the were to go on with the mine they would not go on as they had done. They must have the money provided by the shareholders, as they could not continue to render themselves individually responsible for the debts of the company. If calls are not paid they would use means in their hands to compel payment.

Mr. STODDEN then moved that the meeting, relying upon the reports of Mr. Petherick and others, resolved to continue the prosecution of the mine.

Mr. BOST moved as an amendment that the company be forthwith wound-up, and the assets distributed amongst the shareholders, remarking that his grounds for moving the amendment were that, as according to Mr. Petherick's report, the utmost profit they could expect was 4000s. per year, and that to obtain that profit an outlay of from 20,000s. to 30,000s., and an expenditure of two years of time, was necessary, and that considering the great depth of the mine—300 fms.—the prospects did not justify any further expenditure.

Mr. GOODRIDGE seconded the amendment, but, upon its being put to the meeting, the proposer and seconder alone voted for it.

The original motion was then put, and carried with two dissentients.

In answer to a question from a shareholder, Mr. PETHERICK stated that the estimate of 4000s. per month included the erection of a man-engine, and handed the Chairman the statement on which he had founded his estimate. The great fixed charges—water charges, &c.—were of course beyond his control.

Thanks were voted to Messrs. Petherick, Gill, Bryant, and Treumans, for their reports; and the committee were re-elected. Mr. Noakes was reappointed manager, director and Chairman at a salary of 2500s. per annum; 500s. were voted to the directors for their services during the past three months; and Mr. Moates was re-elected auditor.

A vote of thanks to the Chairman terminated the proceedings.

EAST PROVIDENCE MINING COMPANY.

An adjourned meeting of shareholders was held at the Auction Mart, Bartholomew-lane, on Wednesday, Mr. T. BROOMAN in the chair.

Mr. JAS. HOLLOW (the purser) read the notice convening the meeting, and the minutes of the last, which were confirmed.

A statement of accounts was then submitted, from which the following is condensed:

Balance last audit	£1814 6 4
Mine cost, June, July, Sept., and Aug.	534 3 11
Merchants' bills	48s
Sundries	3 10 0 = £2341 2 8
Calls received	1638 8 6

Balance against adventurers.....£702 14 8

A report from W. Hollow and T. Uren was then read, from which the following is condensed:—Since the end of May about 48 fathoms had been opened in the mine; the lode is from 12 to 15 in. wide, producing occasionally stones of tin, it is 6 fms. 2 ft. below the adit, and they expect to get down to a 10 fm. level about the middle of next month. In Poole's shaft the lode is 15 inches wide, composed of grey and yellow copper ores, fluocon, &c., at present not to value; the adit end is driving west of Poole's for the purpose of bringing down a new shaft to ventilate this part of the mine. Phillips's shaft is sinking below surface, the lode being 18 in. wide, and of a very promising character. At Harvey's shaft they have had some very rich stuff. The character of the lode both here and at Phillips's is of the most congenial description, rough or cavities being frequently found therein; various irregular deposits, or carbonates, have also been found, but being of little depth they are not rich, although containing good stones of tin. From the appearance of the lode at Poole's, they feel confident that as they approach the granite in sinking they will have good deposits of ore.

Mr. HOLLOW then read the minutes and resolutions of the preliminary meeting, held at the mine on the 4th inst., and drew the attention of the meeting particularly to what had been said about opening a banking account, and dispensing with the London meetings. He (Mr. Hollow) said that, individually, he should prefer a banking account, if it could be opened conveniently. In this, as in most call-making mines, he, as purser, was generally in advance, and at the present moment was in advance about 2200s. to the mine. He had opened a banking account with the Messrs. B. & Co., Bankers at the Cornhill, at the commencement of the mine; but being at the time deficient of funds for a pay, wanted to overdraw, and they (Messrs. B. & Co.) would not allow it, alleging as a reason that the company were principally strangers to them they would rather not. Since then he had kept the account in his own hands. It was certainly a saving to the mine in commission, &c., and, perhaps, more convenient to the shareholders. But in this, and about the meetings, he only wished to conform to the wishes of the majority.

A discussion then ensued as to the suggestions of the Cornish meetings.

Mr. LELAND said he represented a very large interest that day, and for himself and friends had every confidence in the purser, feeling quite sure that what he did was the best interest of the company.

A SHAREHOLDER asked the purser when he expected any returns?

Mr. HOLLOW, in reply, stated that they must not expect any returns until the shafts were down and levels driven. At present they were only sinking. A great object was to get at the junction of the kilias and granite, which they hoped to reach within 10 fms. more. The old Providence Mines had made a great deal of copper ore about that junction, and their present workings were producing great quantities of tin in the granite.

Mr. LELAND said he was quite pleased with Mr. Hollow's remarks and the report, and believed they had a most valuable property, requiring only a little time to develop it.

After some further discussion, it was moved by Mr. TREDDINCK, seconded by Mr. LELAND, and unanimously resolved—"That it is the opinion of this meeting that it is expedient in any way to alter the existing regulations for carrying out the affairs of the company." The call of 3s. 6d. per share was confirmed, and a vote of thanks to the Chairman terminated the proceedings.

PEMBROKE AND EAST CRINNIS MINING COMPANY.

A meeting of shareholders was held at the company's offices, Austinfriars, on Wednesday, Mr. MARGESTON in the chair.

Mr. E. KING (the secretary) read the notice convening the meeting, and the minutes of the last, which were confirmed.

The report of Capt. J. Dale and G. T. Trewaren was then read, as follows:—

Dec. 7.—The 162 cross-cut is now extended 82 fms. 3 feet, and bored 18 fms. 1 ft., and we are sorry to say no lode has been met with by notice. We have now passed the perpendicular of the Pembroke lode, and are now, therefore, come to the cross-cut, which has become worthless, and has some 100 fms. to go before it can be further. Considering the great expense of working the Pembroke Mine, we think, under the circumstances, it would not be advisable to continue the level any further, but we do not consider it a bad speculation even now to draw the water out of Hoppe's shaft, and extend on the lode in that level. The eastern mine, as will appear from the following statement, is going on prosperously. The lode in the 100 end is about 8 ft. wide, and will produce 4 tons of ore per fm.; this end is now going forth into virgin ground, and a continuation of a lode of this description cannot fail ultimately to open up ground that will yield a large quantity of ore. The winze, sinking from the 100 to the 112 end, is now 3 ft. 1 in. the lode is still 3 feet wide, and will produce 3 tons of ore per fm. The lode in the 112 end east has been thrown south by a slide, but is now getting free of it; from what we can see of the ore part of it, we are safe in saying that it will yield from 2 to 3 tons per fm., and a further improvement may be expected as we extend this level east. The 112 end west, on branch, is turning out about 1 ton of ore per fm. The various slopes are yielding much the same quantity of ore as for some time past, and our object is to get a greater length of ground laid open, as we are now suffering for the want of this. Nothing is wanting but ground of the same value as what East Crinnis is producing; and as we are daily laying open more ground, the time is not very far distant before we shall be in a better position. Smith's shaft is now sunk about 12 fms. below the 112; it is our object to sink to the 132, and then cross-cut for the lode. We expect our next sale of ore will be about 250 tons, and also some mounds, as usual.—J. DALE, G. T. TREWARREN.

The statement of accounts showed:—

Balance last audit	£288 2 7
Copper ore sold	1095 0 1
Mundic sold	171 5 9
Calls received	612 12 6 = £2167 0 11

Mine cost, Sept. and Oct.£1240 15 1

Merchants' bills paid205 0 6

Coal and freights336 11 0

Sundries43 7 4 = 1825 13 11

petited. To large a direction was not wanted, but he would rather sit at a board of a company where such large sums of money were involved with six or seven directors than at a board consisting only of two or three. They had hitherto worked with perfect unanimity, and always acted unanimously. They had secured Messrs. Howard and Dollman as their solicitors, not because they wished to express any dissatisfaction with their former solicitor, but it was thought by securing these gentlemen of prestige and standing the commercial position of the company would be benefited. He had now to say that the company had gone through the difficult position which every company meets at starting, and had come into a steady state of progress, but they had not been into that state without the aid of Mr. Harrison, which he had not been able to neglect to make no comments. No effort had been made to get the company upon the Stock Exchange, but they believed the company was in a full and prosperous condition whether war continued or peace proclaimed, and it required nothing but united action on the part of the shareholders to secure a very much larger dividend when they next met, except anything unforeseen should supervene. He would, therefore, move that the report be adopted.—Mr. HAYNES seconded its adoption.

Mr. DE JONGE moved, as an amendment, that his report be returned, and that the directors be asked to resign. Mr. Harrison, he fully believed, was a very clever man, but he did not think his position towards that company was wanted. He was receiving a princely salary from them, and he was part of a firm to which he must devote considerable time, and yet the works were under his sole control. They required an independent direction—no director ought in any way to be friendly towards any officer of the company. They had no statement of the quantity of coal raised in India, which every shareholder had a right to know. They did not know the advantage gained by these new arrangements. No reason had been assigned why one gentleman had been removed from the board, and Mr. Harrison, he thought, was the report be returned, and that the new report be discussed at the next general meeting.

ST. JOHN DEL REY MINING COMPANY.

had been made to the quantity of coal raised was that they had a large and powerful opposition to the proposal. At the same time he was happy in being able to state that the company was quite able to meet any opposition. He was happy to say, however, that since Mr. Harrison had been out in India the quantity of coal had so speedily increased that they were not only able to supply the Government contracts but also to meet the demands of private parties. During the last fortnight previous to the closing of the report, there have been raised 20,000 maunds, or 1600 tons, but they expected to raise 300,000 tons.

Mr. BEALE, for the sake of discussion, would second the amendment. He had heard rumours that Mr. Heyman was about to become managing director, and Mr. Austin chairman of the directors.

The CHAIRMAN said those rumours had arisen from a cursory conversation that had taken place, but he would not disguise the fact that if any division of labour were to be made, it would be such as to place Mr. Heyman in the position where he would be appointed, he should present himself as a candidate for the chairmanship.

Mr. BEALE asked if a dividend of 7½ per cent. were declared whether it was likely to be speedily followed up by a call?

The CHAIRMAN answered that if nothing unforeseen occurred no call would be made.

Mr. GREGORY, referring to the contemplated arrangement of appointing a chairman and a managing director, desired his office as director to avert discussion at the board.

Gen. DOWNING remarked that he had been brought into the direction when Sir Herbert Mackay left it. He had had some experience in India, and he would give his attention honestly and fairly to enhance the interests of the company so long as he continued on the direction.

Mr. HAYNES stated that he had put himself forward as candidate for a directorship at the close of the year, and he had been elected to the position, and he had the largest portion of shareholders in the company at home.

He had received 20,000 proxies, representing a sum of 20,000l. Three different times had

EAST INDIA COAL COMPANY.

Mr. H. Hayman as Mr. Havaside were elected, and Mr. Shaw re-elected, directors. On the proposition that Messrs. Noble and Dawson be re-elected auditors, and that 15 guineas be paid to each, an amendment was rejected that they receive 10 guineas.

It was then resolved,—That this meeting recommends the declaration of a dividend of 7½ per cent., payable on March 1, or as near thereto as possible, to be appointed by the directors after the receipts of the amount now due from the Government of India, with power to the directors to reduce the dividend in case of unforeseen circumstances.

On the proposition that 550 guineas be placed at the disposal of the directors, as a remuneration for past services, two amendments were proposed, and lost. It was ultimately agreed that the directors be allowed the said sum.

A unanimous vote of thanks was then passed to Mr. H. Hayman, for the efficient and assiduous manner in which he had conducted the company's affairs.

A unanimous vote of thanks to the Chairman terminated the proceedings.

NANTEOS AND PENRHIW CONSOLIDATED MINING CO.

A meeting of shareholders was held at the offices of the company, Bishopsgate, on Wednesday, Mr. J. W. WILLIAMSON in the chair.

Mr. MURCHISON read the notice convening the meeting, and the minutes of the last, which were confirmed.

A report, from Capt. J. Roach, was read, of which the following are extracts:—

NANTEOS AND PENRHIW CONSOLIDATED MINING CO.

A meeting of shareholders was held at the offices of the company, Bishopsgate, on Wednesday, Mr. J. W. WILLIAMS in the chair.

Mr. MURCHESON read the notice convening the meeting, and the minutes of the last, which were confirmed.

A report, from Capt. J. Roach, was read, of which the following are extracts:—

"The engine-shaft is sunk 3 fms. 5 ft. below the 20, in which the lode is 2 feet wide, and of a promising character, but at present not containing sufficient ore to value; therefore, as the progress of sinking during the winter will, in all probability, be greatly retarded by the wheel being frozen, and other impediments, it has been deemed advisable to suspend sinking until the ensuing spring; in the mean time, the men taken from the shaft and other places on this lode will be employed in driving cross-cutts to intersect the north lode at various points. This, in my opinion, is of great importance, and I believe when the engine is reached it will be found very lucrative. In this part of the belt, traverses beautiful strata, and is and will be developed in parallel ground, where rich deposits of ore were found on Penrhin lode. Should my anticipations be realised, ground would be rapidly laid open, and large quantities of ore be returned therefrom. It is a fact that this lode stands whole to the surface, a height of from 50 to 60 fms. above the deep adit; and as it is only about 16 fms. from Penrhin lode, the shafts already sunk will be sufficient for the discharge of stuff and thorough ventilation of the north lode, if wrought to the surface as it is reached. The ground is of a considerable extent. The lode is $1\frac{1}{2}$ fms. wide, north 14 cwt. of ore per fm., with every appearance of improvement. The same level, west of the cross-cut, is producing 12 cwt. of ore per fm. Since the lode has been intersected $6\frac{1}{2}$ fms. have been driven on its course, which produced 4 tons of ore, or thereabouts. Considering this is all the ground that is laid open on this lode, it speaks volumes in its favour.

"The strata between the adit level, driving east of cross-cut, is at present unproductive. The lode is 1 ft. wide, consisting of muncie, occasionally spotted with lead ore. This I expect will improve as the level is extended east. The lode in the rise above the deep adit averages 2 ft. in width, producing 15 cwt. of ore per fm. Preparations are being made to get up in the old mine, where all the ground worthy of notice will be let

Balance at the bankers	£ 1,500	5	1
In deposit at London Joint-Stock Bank	25,000	0	0 = £26,500
To pay—Drafts running	25,000	0	0
On account of salaries and wages	269	11	8 = £25,269

The CHAIRMAN, in moving the adoption of the report, said he considered the statements therein highly satisfactory, and he believed that in a very short space of time the returns would be very good, and but for the frost and unusually dry weather they would have been much better.

Mr. MCMURDO stated that the new lode added greatly to the value of the property. In a report from Capt. Roach, read at the last meeting, he stated—"Should this lode be intersected by the cross-cut in the 30 from Ewlichgryn, and found productive at that point, it will greatly enhance the value of your property, and you may then safely calculate upon having discovered a lasting and profitable mine." Since then it will be seen that a good lode had been cut at the point referred to, and from the other cross-cuts being driven, in a few months it would be in course of rapid development in a number of places, and in all probability large returns would be made from it. This is believed to be the Eysuntunee lode, which had yielded large returns at the other end of the property, and where operations were now recommended 22 fms. under the old workings; the lode in the rising being worth 16 cwt. per fn. This lode is in whole ground in the sett for nearly three quarters of a mile in length, and for 50 ft. in height, and is so situated as rendering pumping-potentialities for working it for 3 m. At the meeting on Sept. 19 it was decided to erect new dressing machinery in the Rheildol Valley, and active steps were at once taken to carry it out. A contract had been entered into to supply a new wheel and crusher, and erect them for 325*s*., to be completed in 11 weeks from Oct. 26 last. This will give greater facilities for dressing the ores as regards water, &c., and the carriage is expected to be 3*s*. per ton less than from the present dressing-floors. It was satisfactory to find that the shareholders had so well responded to the call of 1500*l*., made less than three months ago, that only 124*l*. was in arrear.

After some discussion, it was resolved to forfeit those shares which were in arrear of both instalments of the call, and of which due notice had been given to the holders, in conformity with the Articles of Association. The meeting was adjourned to Dec. 21.

KYLON POTOSI SILVER-LEAD MINE.—This mine is situate about one mile west of the celebrated Welsh Potosi Mine, now called the Cardiganshire Consols, from which some thousand tons of lead ore, rich in silver, are annually raised. The company has been registered since 1872, Limited Liability, and the present owners consist of 16 persons, each holding 100 shares. The price actually expended upon exploratory operations, and in the purchase of machinery and plant) as payment for the half-share in the property; 16 p. share being likewise paid upon allotment of the other half of the shares to the public. It is remarked that, strictly speaking, this is a private company, but it has been placed under the salutary provision of the Limited Liability Act as a matter of security to the shareholders.

Mining Correspondence.

BRITISH MINES.

ABBEY CONSOLS.—J. Trewin, Dec. 4: The lode at the western engine-shaft is producing a little lead, but not to value. The lode in the 10, west of the western engine-shaft, is yielding from 3 to 4 cwt. of lead per fathom. The lode in the back of the 10, east of the western engine-shaft, is worth on an average 9 cwt. of lead per fathom, and has an improving appearance. The lode in the bottom of the 10, east of the said shaft, is producing 6 cwt. of lead per fathom. The lode in the back of the 10, west of the eastern shaft, is worth 10 cwt. of lead per fathom.

ALFRED CONSOLS.—T. Trelease, T. Hosking, Dec. 8: There is no alteration in the main lode in the 120, east of Field's shaft, since our last report. The main lode in the 140 and 130 fm. levels, east of Davey's engine-shaft, is much of the same size and character as for some time past; this lode in No. 2 winze, sinking below the 110, is worth 35s. per fm. In driving the 120 cross-cut south we have intersected the south branch; this branch is 15 in. wide, producing stones of ore of a very promising appearance; this branch in the 110, east of winze, is worth 35s. per fm.; west of the same it is worth 7s. per fm., a very promising lode. This branch in the 100 is worth 10s. per fm. The north lode in No. 1 winze sinking below the 120 is worth 3s. per fm. The new north lode in the 70 is 2 ft. wide, producing good stones of ore. We have not yet intersected this lode in the 100 cross-cut north. No other change to notice.

ANGARRACK CONSOLS.—James Barratt, Dec. 7: Since my last communication of progress nothing new has occurred in this mine. Cox's shaft is down 8 fms. 3 ft. below the 12; the progress in this shaft has been slow, having hard ground through the past month. The cross-cut being driven north is in 15 fms. 3 ft. 8 in. from Cox's engine-shaft, ground variable, and is hard at present. Our setting took place on Saturday last, when Cox's shaft was taken at 18s. 10s. per fm., and the cross-cut at 8s. 10s. per fm.

BALLYMONEEN.—W. Barkla, Dec. 4: The men that were driving the 25 cross-cut south have been the last three or four days driving east, which is producing stones of sulphur, and has been driven 3 ft. 6 in. We have put the men that were driving the adit east to drive north. At the present end the ground is slow for driving, and has been driven 2 feet.

BALLYVIRGIN.—D. Macdonald, R. Fellow, Dec. 2: In driving the east cross-cut from the north end through the gossan, we cut a soft run of ground and water, which compelled the pure driving in the cross-cut, and also those working in the winze, to leave their places for the present. The water, on account of the heavy rains which lately prevailed, was very quick, but it is not abating. We hope to be able to clear away the stuff in a few days, and resume the bargain as formerly. Previous to leaving the winze the party there cut through the horse of ground which disordered the lode, and came upon a branch of copper ore and gossan 8 in. wide. No. 3 stop is worth 1 ton of copper ore, 10 cwt. of lead, and 8 tons of munda per square fm. No. 4 stop is worth 1½ ton of copper and 5 cwt. of lead per square fm. The south stop is worth 1 ton of copper, 10 cwt. of lead, and 3 tons of munda per square fm. We have put 2 tons of lead, ½ ton of first crop copper, and 2 tons of second crop copper to pile, and also 8 tons of munda. We have prepared for the crusher ½ ton of lead, and 1 ton of third crop copper. To save coals we have disengaged the lift, as we are not working under the 10.

BARF.—J. Frank, Dec. 7: The firebreast in Laidlaw's level has much improved for the better; the lode has assumed a more vertical form, emitting a good deal of water; the ground is much easier, and the lode larger. I am sure that by driving this level much brighter days are in store for us, and that we shall soon have a course of lead, with 1000 ft. of backs to stop away in whole ground, and in all probability it will return the whole of the expenditure back in a month. We have secured Louden's workings, which will not be required for 30 years. The cross-cut is being pushed on to No. 2 lode, where no doubt we shall find it productive for lead ore.

BEDFORD CONSOLS.—J. Mitchell, Dec. 9: The south part of the lode in the middle adit level is producing some very fine specimens of copper ore. The north part of the lode is not looking quite as well as when last reported, but, on the whole, the end continues to present favourable indications for a bunch of ore. In the winze sinking below the shallow adit level there is no change of importance to notice since last report.

BEDFORD UNITED.—J. Phillips, Dec. 7: There is no change to notice in any part of the mine since the report for the meeting.

BODCOLL.—F. Evans, Dec. 7: The 22 east has been extended 1 fm. 5 ft.; making the total driven 3 fms. The lode is producing a little ore—saving work; it is large and well-defined, and gradually improves as we go eastward. Our drawing machine is nearly finished, which will save a good deal of expense in drawing the stuff out.

BOILING WELL.—J. Delbridge, Dec. 4: At the engine-shaft sinking below the 60 the lode is large, yielding lead, blende, and copper. In the 60 west, the lode is large and poor. In the 60 east, to communicate with the 50 west, the lode is yielding stones of lead. We have extended the 50 east to Austin's, but leaving 3 fms. above Austin's. The 50 we have suspended until the lode is cut in the 50, at Austin's. At Austin's shaft, sinking below the 40, the ground is not so hard as last week. In the 40, east of Austin's, the lode is 20 in. wide, with good stones of copper ore, and very wet. In the 30, west of Syrett's, the lode is 6 in. wide, with a little lead. In the 40, west of old sump, north lode, the lode is 1 ft. wide, with good stones of copper ore. The 19, west of Austin's, is in tribute ground. The 30 rise is in tribute ground for copper. Bates's winze, west of Syrett's, 30 to 40 ft. yielding some good lead. The 29, west of Austin's, is producing stones of ore. At Robert's shaft, sinking below the adit, the lode is 2 ft. wide, yielding lead, copper, and blende. Other things without change to notice.

BRONFLOYD.—M. Barbary, Dec. 8: There is no alteration worthy of notice since last report, except that the lode in the deep adit east of the junction is still looking well, and the part we are carrying will yield from 1 to 1½ ton per fathom. The stopes are also yielding fully their usual quantity of ore. Dressing and surface operations proceed satisfactorily.

BYNTAIL.—J. Roach, Dec. 9: The rise above the 10 is up 2½ fms., and quite as good as when reported on last week. The ore averages 5 ft. in width, and is worth full 90s. per fm. We are now driving the 10, west of No. 4 cross-cut, to ascertain the quality of the south part of the lode in that direction; it is now worth 10s. per fm. for lead ore. As soon as we get the level ventilated the 10, east of said cross-cut, will be resumed; here the lode is worth 12s. per fm. for lead ore. Good progress is being made in the 25 cross-cut; we are, I believe, getting very near the lode. The excavations for the tramway and incline are going on favourably. We shall soon be in a position to lay the rail, &c. Yesterday we crossed a branch in the cutting bearing 30 degrees east of north, from which we broke upwards of 30 lbs. weight of solid ore. We pursued it a foot, which appeared to improve as we sunk after it; by-and-bye we shall develop this a little further.

BULLER AND BASSETT UNITED.—G. Reynolds, Dec. 8: Since my last report the shaftmen have cut ground for elstern and bearings, and to-day we hope to complete fixing the drawing-lift from the 65 to the 50 complete, after which we shall commence at once to case and divide the shaft, and cut a pit at that level, which we hope to complete in about four weeks from this time. The lode going west in the 50 is still large, and looking very promising, and we look forward for great improvements in laying open the deeper levels.

BWLCH CONSOLS.—R. Northey, Dec. 4: The lode in the 70 is worth 4 cwt. of lead ore per fm. The stop in the back of the 70 is worth 12 cwt. per fm. The lode in the 60 west is worth 7 cwt. per fm. The stop in the back of the 60 is worth 8 cwt. per fm. Nothing has been done in the 40 since I wrote you last, as I have been obliged to put the men to assist in repairing the shaft at the old mine, which is in a very bad state, but we are getting on with it as fast as possible. The stop in the 40 fm. level is worth 8 cwt. of lead ore per fm.

CAMBORNE CONSOLS.—W. Roberts, Dec. 7: The following bargains were set on Friday last:—The 50 cross-cut to drive north, by four men, at 9s. 10s. per fm. A winze to sink under the 20, by four men, at 9s. 10s. per fm. The 20 to drive west, by four men, at 6s. per fm. The 1 ft. wide, composed of munda and occasional stones, of ore. The adit cross-cut north, by two men, at 3s. per fm.

CARADON CONSOLS.—W. Rich, Dec. 7: The cross-course in Thomasine's shaft is still very regular, well-defined, and nearly perpendicular. It is principally composed of white decomposed granite, very similar to the cross-course in the adjoining mines. There is no great change in the character of the lode in the shaft since last report. We sometimes find a little of the black oxide of copper in the lode intermixed with the gossan.

CARDIGAN CONSOLS.—J. Sanders, Dec. 6: In the 20 west we have driven through a good lode of ore, which is standing in the back of this level for 10 ft. long, but I regret to say that the end at present is poor. There is no change to notice in the 10 east. In the 10 west there is a little improvement. This level has been driven for the last 7 fms. through very unsettled and unproductive ground, but during the past week we have met with the hard part of the lode, which appears to be more settled, and is at present producing stones of lead ore occasionally. The pitch in the back of the 10 is not quite so good as last reported, the lode at present being split into small branches. All other parts of the mine are much the same as last reported.

CASTELL.—F. Evans, Dec. 6: During the last month we have been hindered considerably by the severe weather, &c.; however, during the past week we have extended the 10 east 1 fm. 2 ft.; making the total now driven, 8 fms. 2 ft. 6 in. We shall now make good progress, and shall soon commence to cross-cut our main lode on the north and south. We drive on this now because it is the most speedy to open, and will sooner bring us east far enough to cross-cut the main lode named.

CATHERINE AND JANE CONSOLS.—R. Barry, Dec. 7: The lode in the deep adit end is 18 in. wide, producing 4 cwt. of lead ore per fm., and presenting an improved appearance. The stopes, north-west of No. 4 winze, continue to yield 10 cwt. of ore per fm. The stopes in the cross-branch are not looking quite so well, worth at present 5 cwt. per fm. The lode in the middle adit end is about 1 ft. wide, producing stones of ore occasionally, but nothing to value. In No. 5 winze, sinking below the middle adit, the lode is 1 ft. wide, producing 3 to 4 cwt. of ore per fm. The lode in the new stop, in back of said level, continues to look well, being about 18 in. wide, and worth from 10 to 12 cwt. of ore per fm. In the shallow adit end the lode remains much the same as last reported, yielding good stones of lead, saving work. This level has to be extended some 4 or 5 fms. north-west to get into the run of ore ground driven through in the adit.

COLLACOMBE.—S. Mitchell, Dec. 7: During the last week the 84, west of the western shaft, has been driven 9 ft.; the lode is of a highly promising character, being 5 ft. wide, composed of capel, quartz, prlan, and 1½ ton of ore per fm. No alteration to notice in any other part.

CROWDALE.—J. Richards, Dec. 9: In the pitch in the bottom of the 30 the lode is worth 4 tons of ore per fm. In the pitch in the back of the 30, on the south part of the lode, the lode is improved, and is worth 3 tons of ore per fm.; this south part of the lode appears to be standing whole to the surface, a height of 30 fathoms, and the 10 is being cleared for the purpose of driving a cross-cut south for intersection thereof. About 2 fms. have been driven east on the lode lately met with in the shallow adit level north; it is 2 ft. wide, composed of munda, gossan, quartz, prlan, and a little ore.

CWM SEBON.—J. Boundy, Dec. 4: The 70 west has been driven 14 fms., and about 2 fms. more to get forth to the winze. The lode at present is from 2 to 3 ft. wide, worth about 4 cwt. per fm. I expect to hole to the winze in about a month or six weeks. The 70 east is driven on the south part of the lode 8 fms., the lode small and poor in the present road; driven on the north part of the lode 4 fms., the lode at present 18 in. wide, worth from 4 to 5 cwt. per fm. In the winze sunk below the 60 east 4 fms. 3 ft., no lode has been taken down. We are now sinking on the south part of the lode. The 60 east, on the north part of the lode, is driven 3 fms. 2 ft.; lode 1 ft. wide, worth for lead 6 cwt. of ore per fm. The 30 cross-cut, on the north lode, is driven east 3 fms. 4 ft.; lode 18 in. wide, worth for lead from 3 to 4 cwt. of ore per fm. No lode has been taken down in the end driving west on the north lode. Everything has been pushed on as fast as possible.

DALE.—R. Nisnes, Dec. 9: On Sunday morning last the crank-pin of the engine broke, and we did not cut the engine to work again until Monday evening. The water is going down again very well, so that what might have been a serious accident will only be a delay of a few days.

DEVON AND COURTENAY.—T. Rawdon, Dec. 9th: We have gone through the lode at the 100, and had 3 ft. wide, composed of capels, munda, and copper ore, worth

for the latter 2 tons of ore per fm.; we shall now commence to drive both east and west, which will lay open some good ore ground. The lode in the pitch in the back of the 80 will turn out 4 tons of ore per fm. The lode in the pitch in the back of the 60 will turn out 1 ton of ore per fm.

DEVON AND CORNWALL UNITED.—T. Neill, Dec. 7: The only alteration to report on this week is the winze at William and Mary, on which the lode has gradually improved, and is now worth 7 tons of ore per fm.

DEVON BURRA BURRA.—J. Lord, Dec. 9: The 40 cross-cut north and south are progressing favourably, but we have not intersected the lode yet. In driving north at what is shaft (23 fms.) we have cut through a lode, 5 feet wide, bearing east and west, and composed of peach, prlan, munda, and slight traces of black copper ore. The branch driving east is without alteration.

DEVON GREAT ELIZABETH.—W. V. Williams, W. Goyen, Dec. 9: All our work here is progressing to our entire satisfaction, and by the end of the week we hope to be able to inform you the day on which we shall be ready to put the machinery to work, after which operations will be immediately commenced in sinking Allen's engine-shaft.

DEVON WHEEL BULLER.—F. Bennetts, Jun., Dec. 8: The lode in the 44 west continues its size and character, being about 3 ft. wide, and yielding ½ ton of ore per fm. The lode in the stopes in the back of this level will yield about 1 ton of ore per fathom. The lode in the rise in the back of the 20, is about 1 ft. wide, and will yield about ½ ton of ore per fm. Other parts of the mine are much as when last reported.

DRAKE WALLS.—T. Gregory, Dec. 2: The branches in the 92 east are improved, and will now produce good saving work. The prospects in this level are very encouraging. We have intersected a cross-course in the 80 east, which will require a few days to get through. The branches in the 70 east are producing saving work, and the ground is getting easier for progress. The branches in the 60 east are still disordered by a slide. In driving below the 70, to drain the western part of the mine, the men are making good progress. We have no change to notice in the different stopes since my last. The north lode maintains its size, and worth about 7s. per fm. for tin, with some very promising stones of copper ore, quartz, &c. We have every reason to expect an improvement here at no distant period. The lode in the deep adit is somewhat hard at present, and the progress rather slow.

EAST CARN BREA.—T. Glanville, Dec. 8: In the 14, west of the engine-shaft, the lode is yielding 1 ton of copper ore per fm. No alteration in other parts of the mine.

EAST GUNNIS LAKE.—J. Phillips, Dec. 7: No alteration in any part of the mine.

EAST ROSEWARNE.—J. Delbridge, J. James, Dec. 4: The ground in the 43 cross-cut north is much as last month; we have no appearance of the elstern as yet set at 100. In the 43 south the ground rather hard, no appearance of any lode, set to drive by four men, at 9s. In the 22 east the lode is 9 in. wide, good branch of ore, set to drive by four men, at 4s. 4s. per fm. Hallett's shaft sinking below the 22 on the lode, lode 15 in. wide, good tribute ground; set to sink at 4s. 10s. per fm. The 22, north on the counter lode, is 3 in. wide, yielding some rich silver ore; set to drive at 3s. per fathom. We have a piece of ground cutting a pit at Hallett's, at the 22, which will be completed in a week from this time. The lode in the 22, which will be completed in a week from this time, is 12 in. 17. We hope to hole the south shaft to adit in the coming week, when we shall drive west on the tin lode.

EAST WHEEL FALMOUTH.—W. Hancock, Dec. 7: Since my last the 30 east west, on Channel's lode, is a little improved. The stopes throughout the mine continue to yield just as last reported. No alteration to notice in any other part of the mine. We are pushing down the engine-shaft as fast as possible. The engine and pitwork are in good order.

EAST WHEEL RESSSELL.—J. Goldworthy, Dec. 7: We have just cut into the lode in the 88 end, close up to the extent of the driving, or the ore part of the lode, which does not look so well as where we left it standing in this place, although the place is so small as only to admit of a piece of timber to be placed on it to keep the back of the level from falling in; we hope it will take down much better than it looks in this place; we shall take down the lode to-night and to-morrow. The lode in the 66 end is looking better, and yielding good stones of yellow copper ore.

J. Goldworthy, Dec. 8: We have taken down the inner part of the lode in the 88 end, or the part nearest to the present end; the lode is about 7 feet wide, a mixture of soft spar, prlan, capel, munda, peach, and a little black ore, with stones of yellow ore, but not enough of either of the latter to value; the lode is a very promising one; the first 2 fms. which we have driven of the lode is good, worth full 20s. per fm. The lode in the rise in the back of the said level is looking well, as far as we have seen, worth full 20s. per fm. This run of ore is about 10 fms. in length; it is a great improvement from what it was in the level above. It must be understood that in the upper levels there was no ore on the part of the lode, we hope soon to reach the north part of the lode, which we have the ore upon in the 66. The lode in the 66 end is showing indications of an improvement, with a small ladder of yellow copper ore up and down the end, varying from 1 in. to 4 in. wide, of rich quality.

EAST WHEEL TOLGUS.—Dec. 4: Redruth Consols Lode: In the 46, east of the engine-shaft, the lode is small and poor. The lode in the 34 east is 2 ft. wide, consisting of peach, spar, munda, and stones of ore. The lode in the 22 east is 3½ ft. wide, consisting of peach, spar, jack, and good stones of ore, and has a very promising appearance. John's shaftmen are getting on very well in cutting down the shaft below the 22. The stop in the bottom of the 22, west of Stephens's winze, is yielding 3 tons of ore per fathom. The stop in the bottom of the 22, east, and adjoining John's shaft, is yielding 3 tons of ore per fathom. In the 12, east of John's shaft, the lode is 3 ft. wide, consisting of spar, capel, and ore, and is looking more kindly than for some time past. The stop in the back of the 12, east of John's shaft, is yielding 2 tons of ore per fathom. In the adit end east, on the north lode, the lode is small and poor.

GAWTON COPPER.—J. Gill, Dec. 8: In the 50 east the ground is favourable for driving; present price 4s. per fathom. No change in the lode to notice since last report. The lode in the 50 west is large and more promising, and the ground moderate for driving; present price 5s. per fathom. The stop at the 24 is set to two men on tribute, at 13s. 4d. in 11. The lode is 5 ft. wide, and worth 8s. per fathom. The pitch in the back of the 36 to three men, at 13s. 4d. in 11; the lode is from 7 to 8 ft. wide, and worth 8s. per fathom. The stopes below the 36 to six men, at 4s. 13s. per fathom; the lode is 8 ft. wide, and worth 10s. per fathom.

GERNICK.—Jas. Barratt, Dec. 7: Since last report operations have been carried on with all possible despatch. The lode in the 36 end, being driven east from flat-rod shaft, is 3 ft. wide, and very thorough.

GREAT DOWGAS.—S. M. Rogers, Dec. 8: There is no alteration in the bottom of the cross-cut at the engine-shaft, the lode in the end, driving east, from the bottom of Trevanion's, is large and kindly, with two small rich branches of tin on the north wall. I feel great pleasure to inform you that the lode in the pitch in the lower bottoms is looking well, especially to the east of the nickel branch; if it should hold as at present, it will be a great thing for the mine. We shall surely have a good mine eastward if we open up the ground properly. We expect to have 2 tons of tin for sale at the end of the month. The machinery is all in good order.

GREAT ONSLOW CONSOLS.—G. Rickard, Dec. 8: The ground by the side of the lode, in the 87 west, is moderate for driving through. There is no important change to notice. An increased quantity of water flows from the end, which no doubt comes from the cross-course. In the 107 east the ground by the side of the lode is at present hard, nothing of the lode has been taken down since last report. In the 107 west a small portion of the lode is being carried with the end, which produces stones of ore.

GREAT SOUTH TOLGUS.—J. Daw, Dec. 8: In Lyle's shaft no lode has been taken down in the past week. The lode in the 20, east of Lyle's shaft, is 1½ ft. wide, unproductive. In the 30 west the lode is 1 ft. wide, producing some good stones of copper ore. In the 80 west the lode is 2 ft. wide, producing a little ore. The lode in the winze sinking below this level, east of Lyle's shaft, the lode is 1½ ft. wide, producing 1 ton per fm. The lode in the rise in the back of this level is 2 ft. wide, producing 2 tons per fm. In the 70 the lode is 2 ft. wide, producing 1 ton per fm. The stopes and pitches look well.

GREAT TREGUNE CONSOLS.—J. Spargo, Dec. 9: The ore in course of dressing is of an excellent quality, not better yellow ore, I should say, in the county. The lode in the 70, west of Hobler's shaft, is again improving in copper, and the lode in the bottom of the 70, still holding good. We were flooded for 24 hours, not from any breakage of ore per fathom, but the 12, east of John's shaft, the lode is 3 ft. wide, consisting of spar, capel, and ore, and is looking more kindly than for some time past. The stop in the back of the 12, east of John's shaft, is yielding 2 tons of ore per fathom. We hope to communicate the winze sinking below the 160 in a week or ten days, which will be a great benefit to both levels. No other change to notice.

GREAT WHEEL ALFRED.—M. M. Michell, W. Bugholme, Dec. 4: The lode in Copperhouse shaft is an immense size; we have cut into it about 5 ft. which is ore throughout, but the principal ore course is still further west. The lode, which is about 2 ft. wide in the 190 east, has improved, and now worth 6s. per fm., with every appearance of a further improvement. In the 190 west we are cross-cutting the south part of the lode, and have intersected a branch of good ore, 6 in. wide, taking its whole width it is worth 12s. per fm. The stopes in the bottom of this level are worth 20s. per fm. The south part of the lode, in the winze sunk below the 180, will yield 2 tons of copper ore per fm., but no tin worth anything. The 170 west, on the south part, is 180 we are cross-cutting north through the lode, and the lode in the 170 west, is improved in appearance, producing munda, spar, and a little yellow ore. We hope to communicate the winze sinking below the 160 in a week or ten days, which will be a great benefit to both levels. No other change to notice.

GREAT WHEEL BADDEN.—J. Jenkin, Dec. 7: The lode in the 61 end, east of eastern engine-shaft, is about 2 ft. wide, producing 15 cwt. of lead ore per fm., ground much as usual. In the stopes on the counter above this level the lode is yielding much the same as for some time past. The lode in the winze sinking below the 51 has improved, being about 1 ft. wide, turning out ½ ton per fm. Every other department throughout the mine is without alteration.

GREAT WHEEL BUSY.—J. Nancarrow, Dec. 4: The lode in Harvey's engine-shaft is 3 ft. wide, with less underlie, which is a good indication, and is worth for the length of the shaft 16s. per fm. We have commenced sinking Fielding's shaft below the 100, where there is a 3 ft. wide, producing good work for tin. The lode in Offord's shaft is still large, and worth 8s. per fm. In the rise under Chynoweth's bottom the lode is 4 ft. wide, worth for tin and copper 15s. per fm. We have also commenced rising in back of the 100 west for the purpose of ventilation, where little has yet been seen of the lode; in the winze sinking over this we have lately had some pretty good tin ground. In the 90 east the lode is 5 ft. wide, worth 12s. per fm. for copper. The 80 is producing stones of ore. The lode in the 50 west is harder, but not diminished in size, and is now worth 7s. per fm. The engine-shaft at the Western Mine is finished to 3 fms. below the adit. The pumping-engine, three boilers, and the bob are fixed, and the cylinder in the house. The winz-engine will be ready about the end of next week. The pitwork is in rapid course of preparation, and the masonry will be finished in good time.

HAWKMOORE.—J. Richards, Dec. 6: The shaftmen have cut the elstern-plat below the 40, and will commence sinking to-morrow morning. The rise in the back of the 50 west is worth 1 ton of good ore per fm. In the 50 east the ground is still favourable for driving; we are gaining the end north, and hope to cut the lode in about 2 fathoms driving. At West Hawkmoore the ground is softer for boring; the men are working well.

HINGTON DOWN CONSOLS.—W. Richards, Dec. 8: The lode in the 110, west of Morris's shaft, is 5 ft. wide, ore throughout, with increased quantity of water, which leads me to expect an improvement shortly. In the 100, west of shaft, the lode is 5 ft. wide, and will produce from 6 to 7 tons of ore per fm., and promising a still further improvement. The 75 and 65 east are without change.

HOLMBUSH.—N. Secombe, Dec. 7: The lode in the 145 west is at present not producing ore to value; the stopes and the rise in the back of this level are suspended, and will be set on tribute. The stopes in the bottom of the 145, west of cross-course, are yielding 2 tons of ore per fm.; these stopes are now suspended, for the purpose of sinking a winze to communicate with the 160 as soon as possible. A new stop is being set in the bottom of the 145 west, east of cross-cut. In the 160, east of diagonal, the lode continues to yield 2 tons of ore per fm. The stopes in the back of this level are yielding from 1 to 2 tons of ore per fm. There is no alteration in the lode in the 160, west of the great cross-course. In the 160 west, on the flap-jack, the lode is still unproductive; we have increased the number of men in the end to hasten the intersection of the lead lode at this level. The trial rise in the back of this level is suspended. The rise in back of the 132 south, on the lead lode, is so nearly communicated that the ground north and south of the rise is set on tribute. In the 132 cross-cut, south from the copper lode, there are

strong indications that we are near the lode. We have removed the 14-in. plunger in the 132, at Hitchin's shaft, and supplied its place with a 16-in.; it is working well.

KELLY BRAY.—S. James, Dec. 4: The lode in the 135 east is still small and poor. The lode in the stopes in the back of the 70 west is yielding a fair quantity of ore, and west of winze, worth from 14s. to 15s. per fm. The lode in the 45 east is 4 ft. wide, and worth from 25s. to 30s. per fathom; here we are opening a valuable piece of ground. We intend setting another cross-cut next week in the 50, to drive south, where we hope to meet with the same shed of ore we have in the 45 west. The cross-cut driving south in the 45 is progressing satisfactorily; it is driven 3 fms. We have put six men in the above cross-cut, in order to push it on with all possible despatch; we calculate there are about 4 fms. further to drive to intersect the lode. The tribute department has been improved during the past week.—Eastern Mine: Watson's engine-shaft has been sunk about 7 fms. below the 80, and the ground is still favourable for sinking. The north lode in the 40, driving east, is 1½ ft. wide, composed of quartz, fluor-spar, munda, and spots of copper ore, a very kindly lode, and the ground is improved; there is now in the bottom of the end for about 2 ft. high, and rising as we proceed east, a soft congealed silica, which I have no doubt will very much improve the lode; the lode in the end driving east on the south part is 1 ft. wide, and getting into a more settled state, as it is leaving the influence of the two small cross-courses which were driven through last week. On the whole, I am happy to say that our prospects are looking most cheering.

LADY BERTHA.—James Metherell, Dec. 8: In the 41 cross-cut we are in the lode about 7½ ft. in which we have cut a large rough, where we can get in 10 ft. or 12 ft., and around the same we can break good stones of ore; this I consider is a very important feature for the productiveness of the lode; the end is still turning out good work. The 30 west will produce about 3 tons of ore per fm.; the stopes in the back will produce about 2½ tons of very rich ore per fm.; in this level east we have cut through the lode, which is 2 ft. wide, producing good stones of ore, and is very promising for future operations. Carter's winze in the bottom of the 20 will produce 9 tons of ore per fm. There has been no lode taken down in the 20 end since last report. The lode in the 20 end now about 70 tons of ore at surface and on the quay.

LEWIS.—W. Bishop, W. W. Martyn, Dec. 7: The lode at skip-shaft is going down more perpendicular; consequently we have been obliged to let it stand, but we have today pierced into it in a place or two, and taken out some good tin ore; no doubt it will be found valuable when cut into at the 130, at which point we expect to be at the end of next week, when no time will be lost in driving the ends east and west on the main lode. It should be borne in mind this shaft has been sunk about 20 fms. In the last 11 months; and from a look at the section, which is at Mr. Peter Watson's office, you will see the very great extent of ore ground the 120 and 130 are likely to lay open. At the 120 the lode is very large, and worth 20s. per fm.; the 120, on the south lode, is getting free from the influence of the cross-course, and is producing good stones of tin ore. No change to notice in any other part of the mine since last report.

LLANDUDNO.—Dec. 6: The 56 yard level, north of Vivian's shaft, on the main strings, is worth 10s. per yard, and is set again to eight men to drive north, at 10s. per ton of ore. The cross-cut west of the main strings in this level has been driven 3 yards without intersecting a new string; it is, however, in kindly ground, with stones of ore occasionally. In the 36 yards level, at this shaft, two new stopes have been set, one northward, by four men, at 90s. per ton, and the other southward, by two men, at the same price. A new cross-cut has been set to three men, to drive west of Treweek's shaft, in the 120 yards level, to prove the strings that are known to exist west of the shaft; the price, 40s. per yard, is not a full price, but the men are willing to make the trial, with the assistance, hoping soon to open some ground that will lay to work; it will, therefore, be a comparatively inexpensive trial, and presents a fair chance of success. The 120 yards level, south of Treweek's, has been set to five men, to drive a stop, at 50s. per ton of ore. The 120 yards level north, which has been idle for some months, is set again to three men, at 50s. per ton. There are also two stopes in the 110, south of Treweek's, two men in each, at 50s. per ton. It will be seen that, although the prices per ton given for the stopes are generally high, the number of men and stopes are increased, and the increased returns which we hope for in consequence, will, I hope, be in our favour. There is not anything new that calls for remark in reference to the trial of the cross-cut, and them are set at the usual level; the same remark will also apply to the raising of waste ore, which is still continued, but not in such large quantities as formerly.

MOLLAND.—T. Bennetts, Dec. 8: The lode in the 32 west is 1 foot wide, producing good stones of ore occasionally; in the same level east the lode maintains its size and quality, yielding about 1½ ton of ore per fm., and although the ore is rather of low quality, yet the indications are at present such as to give every encouragement that the lode will become more productive as we proceed east, and in depth. The lode in the 30 east is about 2½ feet wide, much the same as last week; the ground, however, is changing for the better, and we have no doubt this will have a favourable influence on the lode; the stopes in the back of this level are producing about 1 ton of ore per fm. I expect we shall have at the end of this week about 40 tons of ore driven.

NEW WHEEL VADEEN.—P. Floyd, Dec. 9: Milldrum's shaft, sinking below the 12, is now 9 fms. 3 ft. below that level, and we hope to communicate with the 20 by the end of next week. In the 12, driving west, the lode is 2½ ft. wide, worth 6s. per fm., driving at 50s. per fm. The ground in the cross-cut, driving south to cut the Millip Standard lode is favourable, and we hope to reach the lode in about 5 fms. more, where we expect to meet with something good from the tin which has been raised further west. We shall also commence sinking the new shaft below the 15, on the Tolvaids lode, which is 3 ft. wide, and presents indications of making ore below this level. We now intend driving west on Wheel Charlotte lode, which is 2 ft. wide, of a very promising appearance. I am happy to say that all other works are going on well. Our tin sampling will take place by the end of the month.

NEW WHEEL VOR.—Jos. Vivian, Nich. Thomas, Dec. 4: Great North Lode: The stopmen at Harriet engine-shaft are employed in cutting elstern-plat and other necessary work previous to fixing the plunger-lift at the 45. The lode in the 45, driving east, is 1 ft. wide, producing a little tin. The lode in the 30, driving east, is still very large and kindly, producing saving work.—Wheal Bramble: The lode at Lizzie engine-shaft, sinking under the 10, is worth for the length of the shaft 40s. per fathom. The lode in the 10, driving east, is worth 12s. per fathom. The lode in the same level, driving west, is worth 16s. per fathom. No lode taken down

is sunk 4 ft. and the 192. We have cut 3 ft. into the capel of the lode at this level but have not yet reached the lode; the capel is very hard, and is letting out a large quantity of water, which has entirely drained the level above. The lode in the north of the shaft, is 2 ft. wide, worth 15¢ per fm. We have no alteration to notice the south end in this level. The lode in the winze sinking below this level is 4

Blackett, and Co., to arrive, at \$5 50c. cash. Spelter is dull, and prices continue without change, the quotation being \$5 1/2c. six months.

COPPER MINING COMPANIES IN THE UNITED STATES.—Messrs. Dupee, Beck, and Sayles, under date Boston, Nov. 20, state—Since report of the 10th inst. there has been an increasing tendency to speculation in mining shares, especially in those of the Portage Lake district. The money market continues easy. Ingot copper dull at 23 1/2c. for four months; but with the very moderate supply in first hands, and the firmness with which it is held in foreign markets, no further decline at present is probable. It is not, however, improbable that the present improvement in the share market may be checked by the usual very long interval between the close of navigation and the arrival of the overland mails from the Lake.

The **MINING MARKET** has continued throughout the week in a state of the greatest activity, and a larger amount of business has been transacted than we have noticed for many months past. Tin has advanced 4 1/2 per ton, and copper expected to rise, also, before Christmas. These circumstances, combined with the discoveries that have been made, render it probable that the present activity will increase, rather than diminish. Heavy dividend shares have been largely dealt in—such as West Seton, at 295 to 300, and a good demand. Basset, 210 to 215; a dividend of 6 1/2 per share declared at the two-monthly meeting. South Caradon, 405 to 410. Providence Mines have advanced to 65. Wheel Margaret, 60 to 61, and in request. Great Alfred have advanced from 2 1/2 to 4, in expectation of a course of ore in the 200 fm. level. Alfred Consols more enquired for. Wheel Charlotte, to which we referred last week as likely to commence dividends, has advanced from 10 to 17 1/2, so that this mine has had a rise of 10,000c. in a week; on Thursday information was privately received that a great improvement had taken place, and shares rose quickly from 12 to 17 1/2. Hingston, without any reported change, have been duller, and receded to 3 3/4. Marke Valley in request at 2 1/2 to 3. North Robert, 2 1/2 to 2 3/4; East Caradon, 3/4 to 1, buyers. South Caradon Wheel Hooper, 3/4, and in request. Ludcott, 2 1/2 to 3 1/2; East Rosewarne, 1/2; Wheel Trevelyan, 28 to 29 1/2, and business doing. Wheel Mary Ann, 46 to 47. North Basset have been more in request, at 8 to 8 1/2; Wheel Grenville quiet, and receded from 2 1/2 to 1 1/2. Tolcarne, 13s. to 14s.; Brynall, 10 1/2, and mine rather improved. North Downs, 2 1/2 to 3, and large transactions taken place. West Caradon, 13 1/2 to 13 3/4; Lady Bertha have off 26s. to 28s. Wheel Crebor, 1 to 1 1/2, and a very large business done. A discovery was announced early in the week on the Georgina lode, 12 fms. below the Tunnel level; the eastern end having come into ore worth 100 per cent, and which has subsequently improved. Above the tunnel of the Tavistock Consols this lode yielded several hundred tons of copper ore; and as this discovery is 12 fms. under it, with good backs, some importance is attached to the discovery. Another feature of the company is, that there is ample machinery on the mine for all purposes, and the expenditure, therefore, is very moderate. North Frances, 8 to 8 1/2; driving is about commencing on a branch of ore in the 70.

East Russell leave off 6 1/2 to 7; a good deal of interest has been attached to this mine during the week, it having been known that the lode in the 88 would be taken down for the first time since the meeting on Nov. 11. On Tuesday the shares reached 8 1/2, but on Wednesday morning advice was received that, in putting in a piece of timber to support the level, about a foot of the lode had been seen, which did not look so well. In the afternoon, on the faith, it is presumed, of some private telegram, the shares were recklessly knocked down to 6 1/2. On Thursday, however, the official report was received, when the truth was known, and, despite renewed attempts to depreciate the shares, they rallied to 7 1/2. It appears that on taking down the lode the first 2 fms. were worth full 200 per fm., but the rest, up to the end, contained black and yellow ore, though not enough to value, the lode being 7 ft. wide, and very promising. The agent states that the 88 has passed through a course of ore 10 fms. in length, which "is a great improvement from what it was in the level above, as it must be understood that in the upper levels there was no ore in this part of the lode." He also reports the lode in the rise in back of the 88 at 200 per fm. Now, it must be remembered that a course of ore was never expected in the 88 until it was up to the junction of the two lodes, which has not yet been reached. In his report of Nov. 3, Capt. Chas. Thomas remarked—"The 88 end is about 10 fms. short of the point of junction of this with another part seen in the 66, where a great improvement took place. I do not expect a very decided and great improvement in this (the 88) level before that point is reached, which can be done in about five or six weeks after Homersham's shaft is holed to this level; or, say, in two months from this date," which would be about Jan. 3. The fact is, therefore, that the 88 having been so productive under where there was no ore in the 66, what must be looked for when the former is under the ore ground in the latter? It may be added that the lode has increased from about 7 in. in the 66 to about 7 ft. wide in the 88. Nor is the 88 the only point of interest in the mine. The 66 is nearly under some ore found in the Tunnel level, and "is showing indications of an improvement, with a small leader of yellow copper ore up and down the end, varying in width from 1 to 4 in., of rich quality." The question has been mooted, whether there be not a remedy against the practice (now becoming of almost daily occurrence in this and other mines) of depreciating the property of bona fide holders to the extent, as in this case, of 6000c. in one half-hour. We are also asked, would a shareholder, who might be induced to sell under such circumstances, be justified in refusing to deliver the stock? and whether he would have any redress at law? These are questions, however, that we cannot take upon ourselves to answer. We do our best to keep the public in possession of the true state of the mines, derived every week from official sources; and the shareholders have only themselves to blame if they allow themselves to be misled by the jobbing tricks of the "outsiders" on the market. South Carn Breas have been in considerable request, at 2 1/2 to 3; the lode at the shaft is reported worth 2 tons per fm. Wheel Hender, 1 to 2; though the quotation is merely nominal. The mine is said to be greatly improving, and a course of ore looked for in the 24, which will soon commence driving. Herodsfot, 6 1/2 to 7 1/2; Rosewarne and Herland, 7 1/2; Trevoile, 17 to 18; United Mines, 100, buyers; North Rosewarne, 21 to 22 1/2; North Croft, 3 to 3 1/2; Stray Park, 3 1/2 to 4; South Condor, 4s. to 5s.; North Dolcoath, 5 1/2 to 6; Pendean, 4 1/2 to 5. Wheel Wrey have been in great demand, and leave off 2 1/2 to 2 3/4. Tamar Consols, 1/2 to 1; Tincroft, 3 1/2 to 3 3/4; Kelly Bray, 2 to 2 1/2; Carn Brea, 60 to 62 1/2; Nanteos and Penrhyn, 22s. 6d. to 25s.; South Tolgus, 7s. to 8s.; East Tolgus, 5s. to 6s.; Ludcotts, 40s. to 42s. 6d. In East Basset a very large business done at prices varying from 155 to 165, and they leave off 160 to 170. Great Hewas, 1/2 to 1; North Miners, 5 to 5 1/2; South Basset in demand at 4. Wheel Sydney enquired for at 1/2 to 1. West Par, 13s. to 15s., also in request. Par Consols, 16 to 17; Grambler and St. Aubyn, 130 to 135; Gonomena, 8; Craddock Moor, 28 to 30; St. Andrew's, 230 to 240; St. John del Rey, 10s. to 11s.; Vale of Towy, 11s. 6d. to 12s. 6d.; St. Ives Consols, 30 to 35.

At Redruth Ticking, on Thursday, 4109 tons of ore were sold, realising 25,160 10s. 0d. The particulars of the sale were—Average standard, 136 1/2; average produce, 6 1/2; average price, 6 1/2 2s. 6d.; quantity of fine copper, 267 tons 4 cwt. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
Nov. 11.	2704	134 1/2	6 1/2	5 15 0	28 15
" 18.	4386	134 1/2	6 1/2	5 15 0	28 15
" 25.	3285	135 10	6 1/2	6 0 0	33 3
Dec. 2.	3708	134 1/2	6 1/2	6 0 0	33 3
" 9.	4109	136 9	6 1/2	6 2 6	34 3

Compared with last week's sale, the advance has been in the standard 1 1/2 7s., and in the price per ton of ore about 1s. 9d. Compared with the corresponding sale of last month, the advance has been in the standard, 3 1/2 16s., and in the price per ton 4s. 10d.

In the **COAL MARKET**, during the past week there has been a considerable decline in the price, the quotations on Monday being—Best Wallsend, 18s.; second quality, ditto, 16s. to 17s. 3d.; manufacturers' 13s.; and Hartleys, 14s. to 15s. The number of ships at market was 174, of which number only 48 were left unsold. On Wednesday there was a good supply, 154 ships being at market, 118 of which were sold, but the prices remained without alteration. Yesterday, there was a great falling off in the supply, only 66 ships being at market, 48 of which were sold at an advance on former rates, the closing prices being—Best Wallsend, 18s. to 18s. 6d.; second quality ditto, 16s. 3d. to 17s. 6d.; manufacturers' 12s. 6d. to 15s. 6d.; Hartley's, 14s. 6d. to 15s. 6d.

COAL CONTRACT.—The Consulate Generale of France require tenders for the supply of 2,500,000 kils. of Newcastle coal, and 1,500,000 kils. of Cardiff coal, for delivery at Cherbourg.—Dec. 27.

In **SALTPETRE**, during the past week there has been very little doing, but previous prices have been fully maintained, holders refusing to sell except at an advance. The only sales we hear of are 479 bags of Bombay, 1 1/2 per cent. refraction, at 41s. 6d., and 250 bags of fine qualities by private contract, terms not known. On Wednesday 680 bags of Bengal, 9 1/2 and 1 1/2 per cent. ref., was bought in at 41s. 6d. to 41s.; and 232 bags of Bombay, ref. 80 1/2 per cent., at 30s. During the past week 168 tons have been landed, and 274 tons delivered, leaving 2420 tons in stock, against 6756 tons at the same time last year.

CONTRACTS FOR SALTPETRE.—372 tons of refined required by the Belgian Government, and 200 tons by the French Government.

At **Wheel Basset** meeting, on Tuesday, the accounts showed—Balance last audit, 1389 8s. 9d.; ore sold (deducting dues), 6645 4s. 7d.; discounts, 67 14s. 7d.; =8041 17s. 11d.;—Mines cost for Sept. and Oct., 2707 16s. 10d.; merchants' bills, 799 16s. 3d.; leaving credit balance, 4533 16s. 10d. The profit on the two months working was 3144 7s. 1d. A dividend of 3072 1/2 (6s. per share) was declared, and 1401 15s. 10d. carried to credit of next account. The agents reported that on the middle lode the 88 was yielding a little tin. The 55 east was yielding saving work for tin, and opening tribute ground. The 65 east was worth 1 1/2 ton of copper ore per fm. The 65 west was yielding stones of tin. The 55 east is saving work for tin, tribute ground. In the 45 east they were opening good tribute ground. The pitches in this part of the mine on copper and tin are still looking well, and producing the usual quantity.

At **Great Wheel Vor** meeting, on Wednesday (Mr. G. Noakes in the chair), a call of 10s. per share was made, payable forthwith, and it was resolved to continue the working of the mine. Thanks were voted to Messrs. Petherick, Gill, Bryant, and Tredinnick, for their reports; and the committee, managing-director, and auditor were re-elected. A report of the proceedings will be found in another column.

At the **Pembroke and East Crinnis** Mine meeting, on Wednesday (Mr. Margeson in the chair), it was agreed that the Pembroke portion of the mine should be abandoned, inasmuch as a large sum of money, derived from the East Crinnis Mine, had been expended thereon without any satisfactory result. The sale of the materials, it was estimated, would realise about 3000c. It was thought that in three or four months every liability would be liquidated, and this mine would become an increasingly valuable property. A call of 1s. per share was made.

At the **United Mines** meeting, on Dec. 1, the accounts showed—Ores sold from Aug. to Oct., 7702 15s. 8d.; sundries, 4482 3s. 1d.; =8180 18s. 9d.;—Balance last audit, 7634 6s.; mine cost for Sept. and Oct., 2752 14s. 6d.; tributers' balances, 1229 13s. 6d.; merchants' bills, &c., 2509 5s. 10d.; leaving credit balance, 8957 18s. 11d. There was a profit upon the two months' working of 1659 4s. 11d. Capt. J. Davey reported that they were raising in Wheel Moor about 150 tons of mundaic per month. They expected to make the same amount of profit for Nov. and Dec. as in the two preceding months.

At **Carn Galver** Mine meeting, on Dec. 2, the accounts showed—Balance last audit, 3427 7s. 9d.; arrears of call, 117 1s. 6d.; mine cost from July to Sept., 5423 5s. 11d.; lords' dues, 327 15s.; merchants' bills, 1134 12s. 3d.; sundries, 567 8s. 6d.; =1134 13s. 5d. A call of 10s. per share was made, payable forthwith. Capt. M. Rath and E. Hargis reported that the lode was being driven at east and west about 12 fms., and there was a cross-cut in progress from the 40 towards the new lode.

At the **East Ellen** Mine meeting, on Tuesday, the accounts showed a debit balance of 3s. 1d. It was resolved to sink the shaft east of the 62 end, driving in continuation of the deep adit, where the lode was reported worth from 100 to 120 per fm. A call of 5s. per share was made.

At **Mill Pool** Mine meeting, on Wednesday, the accounts showed—Balance last audit, 5987 8s. 3d.; mine cost for four months ending Sept., 1957 7s. 7d.; merchants' bills, 840 18s.; land destroyed, 77 10s.; =3407 3s. 9d.;—Tin sold, 2092 19s. 9d.; leaving debit balance of 1311 4s. A call of 25s. per share was made.

At the **South Wheel Seton** meeting, on Dec. 2, the accounts showed—Balance last audit, 3787 12s. 8d.; mine cost July, 1212 6s. 3d.; Aug., 1477 17s. 5d.; Sept., 1390 16s. 9d.; Oct., 1177 8s.; merchants' bills, 3057 6s. 5d.; =12017 7s. 6d.;—Call received, 8007; sundries, 21 18s. 6d.; leaving debit balance, 3057 14s. A call of 2s. per share was made, payable forthwith. Capt. M. Rath and E. Hargis reported that the lode was being driven at east and west about 12 fms., and there was a cross-cut in progress from the 40 towards the new lode.

At the **East Providence** Mine adjourned meeting, held at the Auction Mart, London, on Tuesday (Mr. T. Boorman in the chair), the accounts showed—Balance last audit, 1314 6s. 4d.; mine cost, June, July, Aug., Sept., 5347 3s. 11d.; merchants' bills, 489 2s. 3d.; sundries, 72 10s.; =2341 2s. 8d.; calls paid, 16387 8s.; leaving a balance against adventurers of 7022 14s. 6d. A call of 3s. 6d. per share was made. Capt. W. Hollow and T. Uren reported that the future costs would be about 1700 per month, the prospects of the mine being much the same as at the last meeting, and that nothing new could be expected until the shafts are sunk deeper and the levels opened on the lode. Since the last meeting all the excavations and other surface works have been completed. A resolution was passed to the effect that no alteration was to take place in the mode of transacting the business of the mine.

At **South Crenver** meeting, on Monday, the accounts showed—Balance last audit, 117 10s. 2d.; calls received, 1137 11s. 4d.; copper ore sold, 3577 8s. 6d.; other receipts, 110s. 2d.; =16287 14s. 8d.;—Paid labour cost, September and October, 5427 6s. 3d.; tribute, 757; sundry merchants' and acceptances, 7547 0s. 10d.; London charges for two months, 227 7s. 1d.; other payments, 1687 9s. 6d.; leaving in hand for sublet, 577 7s. 10d., and to next account, 177 6s. 8d. The liabilities being in excess of assets 1299 15s. 4d., a call of 1s. per share was made. The agent's report recommends an outlay of 600c. to try the south lodes during the next eight months.

At the **General Mining Company for Ireland** meeting, in Dublin, on Monday, the accounts showed—Ore on hand at the commencement of the half-year, 12427; stores, 1657; mining disbursements, 17187; office and other expenditure, 1607; =32857.—Ore sold, 17137; ore now on hand, 1137; stores, 1857; leaving a debit balance of 2517. It was stated that the sulphur mines at Knockaree presented a favourable aspect, and that an expenditure of about 80c. in unwatering the mine would render it more remunerative than hitherto. At the copper mine of Ballinacree favourable results were anticipated; Gurnadine was producing about 1 ton of lead and from 1 to 2 tons of copper ore per week. At East Shallee, the wheel-pit has been completed. The prospects of further success in the working of the property, and increasing its value, were more favourable than they had been for some time. With respect to the working of the property for the last half-year, although the profit had been trifling, still a profit had been realised, which was apparent from the fact that 2807 of the expenditure had been of a purely speculative character; and the actual working of the property for the half-year showed a small profit of about 307. Capt. T. King reported that at no time had he seen so many places presenting every prospect of a speedy and favourable change. Their machinery was in good working order. Materials were being prepared for the construction of a railway from the Gurnadine crusher to the jigging machines; and it was expected, with the ore raised at Ballinacree and Gurnadine, to keep the crusher constantly employed.

At **New Wheel Frances** Mine meeting, on Nov. 24, the accounts showed—Balance last audit, 767 15s. 7d.; mine cost from July to Sept., 1431 9s. 7d.; merchants' bills, 347 19s. 11d.; =2617 9s. 1d.;—Call, 2567; leaving debit balance, 54 9s. 1d. A call of 5s. per share was made, payable within 14 days. Capt. J. Ely thought the adventurers had a good piece of mineral ground, which should be developed vigorously.

At **Tavy Consols** Mine general meeting, held at the Auction Mart, on Thursday, it was agreed to place the management of the mine under the Joint-Stock Companies Act of 1856, with limited liability. Mr. J. S. Hemming, of 23, Moorgate-street, was appointed secretary, with instructions to take the preliminary steps for effecting the same. A call of 3s. per share was made, and arrangements for developing the lode proved so rich in Lady Bertha, the adjoining mine.

At **Redmoor** quarterly meeting the accounts showed a balance in hand of 113s. 8d.; assets over liabilities, 2157 4s. 1d. In the assets, however, credit is not taken for lead and copper ore of the mine about 600c. nearly ready for sale, and the greater part of the costs upon which have been charged. A call of 6d. per share was made. The report stated the returns for the three months had been 25 tons of No. 1, and 14 tons of No. 2 lead ore; 17 tons of No. 1 and 10 tons of No. 2 would be ready for sampling early next week.

At the **Nanteos and Penrhyn Consolidated Mines Company** meeting, on Wednesday (Mr. J. W. Williamson in the chair), the cash account showed—Balance last audit, 137 10s. 7d.; calls received, 13757 5s. 6d.; lead ore sold, 6607 3s. 6d.; loans and interest, 4907 2s. 6d.; =24497 2s. 10d.;—Labour cost, 10197 8s. 8d.; merchants' bills, 2867 2s. 8d.; lords' dues, 657 1s. 10d.; loans and interest, 5887 9s.; office expenses and sundries, 1697 8s. 9d.; leaving balance in hand, 3297 19s. 2d. A report from Capt. J. Rosch of a highly satisfactory character, was read. It was resolved that the shares in 1859 be forfeited, and the meeting was adjourned to Dec. 21.

At the **Robin Hood Mining Company (Matlock)** half-yearly meeting, the accounts showed—Calls, 2917 5s.;—Mines cost, &c., 2267 8s. 4d.; arrears of call, 227 10s.; leaving a credit balance of 457 6s. 8d.

At the **St. John del Rey** Mine meeting, yesterday (Mr. J. D. Powles in the chair), the accounts from March to September showed a profit of about 4137 1/2, but which did not yet come to hand. The quantity of ore stamped during the half-year had been 4190 tons, being a larger quantity than had been operated on during any previous six months, but the standard was lower than it had been for several years. They had standing at the western part of the Bahu some 36,000 tons of lode. The western part of the mine, Capt. Treloar felt warranted in stating, promised to be a great acquisition to the company.

At the **East India Coal Company** meeting, on Wednesday (Mr. W. S. Austin in the chair), it was agreed that a dividend of 7 1/2 per cent. be declared, payable on March 1, or as near thereto as possible, and that the directors be empowered to reduce the same if unforeseen circumstances should occur. Mr. H. Hayman and Mr. H. Haviside were elected directors. The sum of 7507 was voted to the directors for services rendered. The prospects of the company were stated to be of an encouraging character.

In **Foreign Mine Shares**, during the past week there has been but very little doing, and prices for the most part continue firm, the principal features being a considerable improvement in Imperial Brazilian and United Mexican. St. John del Rey has been but little in demand. Clarendon Consolidated has been in request, at 5s. to 7s. 6d.; East India Coal, 6 1/2 to 7 1/2. The North Rhine Company of South Australia were freely enquired for, at 3-16 to 5-16 per fm. The St. John del Rey report states that the produce of gold for the six months ending Sept. 17 has been 139-811 ozs., while the produce for the corresponding period of 1857 was 129-498 ozs.; the profit for the above-named period, as shown by the Morro Velho account, is about 4137 1/2. The quantity of stone stamped during the half-year has been 4190 tons, being a larger quantity than has ever before been operated on during the same space of time; the shares are quoted at 9 1/2. Copalpo, 10 1/2; Cobro Copper, 38 1/2; General, 20 1/2; Bon Accord, 1/2 per fm.; Pontigbaud, 4 1/2 5 1/2; Linars, 8 1/2. The Lusitanian report shows that the works are being steadily prosecuted, the yield of ore being rather above the average.

From **Leeds**, our correspondents (Messrs. Gledhill and Co.) state that there has not been much business done in mining shares this week. Sellers of Craven Moors at 11s. 3d., buyers at 10s. Wet Groves, 257, sellers. A Leeds shareholder in East Rosewarne Mine called our attention to the great discovery they had made, having cut into a lode which produced 1880 ozs. of silver per ton of 20 cwts., from an assay made by Messrs. Mitchell and Rickard. To show, and we hope to convince, some of those who are of opinion that mining is altogether a blank, there being no prizes in it, and also to cheer the few of those who are making enquiries, we refer to the list of mines which have declared dividends during the month of November, amounting to 36,921 1/2, the particulars of which were published in last week's Journal.

THE INDIA, CHINA, AND AUSTRALIAN MAILS.—*Alexandria, Dec. 7.*—The *Bengal*, with the *Calcutta*, China, and Australian mails, reached Suez on the 5th inst. The *Victoria*, from Melbourne, sprang a leak near Ceylon, and the mails and passengers were transferred to the *Oneida*, which broke down near Aden. The *Niagara* leaves Alexandria this morning (Dec. 7) with gold, value 1,30,000c. Dates from Melbourne are to Oct. 15. The Legislature assembled on the 7th. The first batch of debentures is shipped by this mail. The diggers were returning disappointed from Port Curtis. Trade was quiet and money plentiful. The departures of gold ships for England were—Sept. 21, the *Orwell*, for London, with 79,220 ozs.; Oct. 6, the *Kent*, for London, with 97,686 ozs. At Sydney, Oct. 9, the share market was active. Government debentures firm. Exchanges and discount unaltered. The arrivals of produce hindered by wet weather.—*The Times.*

WEEKLY DIARY.

MEETINGS.	
MONDAY	Wheat Union..... 50, Threadneedle-street—at 1. On the Mine.
TUESDAY	Garreg Mine..... 13, George-yard—at 1. On the Mine.
WEDNESDAY	New Crow Hill..... 58, Old Broad-street—at 2. South Europe..... 29, New Bridge-street—at half-past 2.
THURSDAY	Great South Tolgus..... 50, Threadneedle-street—at 1. South Australian Company..... 4, New Broad-street—at 12.
FRIDAY	Bolling Well..... 27, Austin-frirs—at 1. Ashburton United..... 51, Stephen-st., Bristol—at half-past 4.
SATURDAY	West Alfred Consols..... 38, New Broad-street—at 2. Carvath United..... 27, Austin-frirs—at 2.

Secretaries and pursers will oblige by forwarding notices of forthcoming meetings.

LEAD ORES.

Sold on December 6.			
Mines.	Tons.	Price per ton.	Purchasers.
Tamar Silver-Lead	60	£18 18 0	Locke, Blackett, & Co.
Round Hill	30	13 5 6	Walker, Parker, & Co.
Sold on December 7.			
Vale of Towy	82	£13 13 0	Panther Co.
ditto	3	12 1 6	ditto
ditto	9	11 11 0	Sims, Williams, & Co.
ditto	10	9 9 0	ditto
Ticketing at Holywell, December 9.			
Maesyrwddu (Talargoch).....	58½	£19 15 0	Adam Eytton.
ditto	29½	13 18 0	Walker, Parker, & Co.
Coetia Llys (Talargoch)	16½	14 7 6	Adam Eytton.
Talacre	3	14 0 0	Courage and Co.
Deep Level	50	12 18 0	Walker, Parker, & Co.
Holywell Level	30	15 5 0	Courage and Co.
Brynford Hall	15	14 2 6	Newton, Kentes, & Co.
Rhosceir	70	14 5 0	Walker, Parker, & Co.
Flaschwydd	25	14 15 6	ditto

BLACK TIN.

Sold on December 2.			
Tons c. q. lbs.	Price per ton.	Amount.	Purchasers.
Frideaux Wood..... 8 10 1 17	67 0 0	582 12 8	Enthoven & Sons.
ditto..... 1 7 3 24	67 0 0	53 12 8	—

COPPER ORES.

Sampled Nov. 24, and sold at Tabb's Hotel, Redruth, Dec. 9.					
Mines.	Tons.	Price.	Mines.	Tons.	Price.
West Basset	79	£4 11 0	Great Wheal Alfred	53	£5 17 6
ditto	75	4 8 0	ditto	51	5 19 6
ditto	71	4 16 6	ditto	50	4 9 6
ditto	63	6 6 6	ditto	32	5 5 6
ditto	60	6 16 0	ditto	28	4 7 0
ditto	59	4 8 6	ditto	16	2 18 0
ditto	58	5 6 0	Wheal Charlotte	74	9 6 0
ditto	49	6 2 6	ditto	68	7 1 6
ditto	44	6 6 6	ditto	40	4 12 0
ditto	33	4 15 6	ditto	26	11 0 0
ditto	28	3 14 6	North Basset	63	3 7 0
ditto	24	12 7 6	ditto	51	4 9 0
Carn Brea	83	3 15 6	ditto	35	4 11 0
ditto	77	11 1 6	ditto	27	6 18 6
ditto	72	0 7 6	ditto	15	14 0 0
ditto	58	6 19 6	ditto	11	15 18 0
ditto	47	3 0 6	Rosewarne United	58	7 9 6
ditto	43	4 6 0	ditto	57	7 7 6
ditto	40	1 5 6	ditto	31	8 9 6
ditto	38	8 11 6	ditto	18	18 11 6
ditto	29	4 5 6	West Crinnis	90	6 7 6
Wheal Buller	111	5 11 0	ditto	20	5 9 6
ditto	75	4 15 6	Botallack	24	11 5 6
ditto	69	2 1 6	ditto	31	11 2 6
ditto	52	5 17 6	ditto	20	11 12 6
ditto	33	2 12 6	Pendean Consols	74	2 8 6
ditto	39	2 1 6	ditto	6	11 8 0
Great South Tolgus	83	7 15 6	Carvannall	27	1 6 6
ditto	43	6 0 6	ditto	18	4 12 0
ditto	47	5 15 6	ditto	17	6 2 6
ditto	45	6 0 6	Wheal Anna	43	5 12 6
ditto	41	3 9 6	ditto	17	2 17 0
ditto	35	10 12 6	Wheal Trebarvah	36	6 8 0
ditto	34	7 7 6	ditto	21	10 8 0
ditto	39	7 19 6	East Alfred Consols	49	7 7 6
Alfred Consols	79	5 19 0	Wheal Trehilly	32	6 7 6
ditto	46	9 9 0	West Par Consols	13	0 17 0
ditto	45	6 10 0	ditto	12	8 14 0
ditto	28	2 4 6	Lewis Mines	16	5 7 6
Nanspunner	71	5 16 0	Great Work	8	9 1 6
ditto	29	7 7 6	ditto	7	9 1 6
ditto	18	5 6 6	Cambrone Consols	8	9 3 0
ditto	18	2 16 6	ditto	5	11 6 6
United Mines	114	4 14 6	Great Wheal Fortune	7	3 14 6
ditto	113	7 9 0	ditto	4	10 5 6
ditto	51	4 9 0	Spearne Moor	9	7 14 0
Par Consols	65	10 4 0	ditto	1	25 0 0
ditto	62	11 9 0	Pencorse Consols	5	2 1 6
ditto	58	8 18 0	ditto	4	11 1 6
ditto	52	8 11 0	Tremoor Consols	3	2 18 0
TOTAL PRODUCE.					
West Basset	643	£354 5 6	Carvannall	62	£ 22 14 0
Carn Brea	496	2813 14 6	Wheal Anna	60	290 6 0
Wheal Buller	570	1571 14 6	Wheal Trebarvah	67	448 16 0
Great South Tolgus	333	2248 3 6	East Alfred Consols	49	295 0 0
Alfred Consols	330	1956 6 0	Wheal Trehilly	32	204 0 0
United Mines	278	1607 9 0	Wheal Consols	18	103 0 0
Par Consols	237	2214 11 0	Lewis Mines	16	96 0 0
Great Wheal Alfred	230	1176 17 0	Great Work	15	135 18 6
Wheal Charlotte	208	1639 6 0	Cambrone Consols	13	81 8 6
North Basset	292	1169 2 6	Great Wh. Fortune	11	67 3 6
Rosewarne United	164	1451 0 0	Spearne Moor	10	94 6 0
West Crinnis	110	683 5 0	Pencorse Consols	9	55 5 6
Botallack	85	960 14 0	Tremoor Consols	3	8 14 0
Pendean Consols	80	247 17 0			

THE PROGRESS OF MINING IN 1857, BEING THE FOURTEENTH ANNUAL REVIEW.

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Notices to Correspondents.

* Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

PRACTICAL MINING—ORE DRESSING.—My attention has been directed to the letter of "Scrutator," in your Journal of Nov. 27. Circumstances beyond personal control have prevented the fulfilment of my promise to give you a history of my invention. As soon as possible you shall have it. In the meantime allow me to refer your correspondent to your Journal for March 13, of this year, and to another Number of a week or two previous date for a full disclaimer on my part of having been in any way indebted to Alkin's *Dictionary*, and a denial that I could find in it anything that could have assisted in the development of the invention. If your anonymous correspondent thinks different, I shall feel obliged to him, or any one else who will point out the supposed germs of the invention. That my invention is not entitled to the classification hinted at by your correspondent, is proved by the fact that my process has been continuously in operation at Drake Walls Tin Mine, Gunns Lake, near Calstock, about ten years. Before the introduction of my process the tin ores raised at this mine fetched the lowest price of any in Cornwall; now they obtain the highest price, of course to the great advantage of the mine.—ROBT. OXLAND: Plymouth, Dec. 7.

MINERALS IN CANADA.—An interesting discovery has been made in Nova Scotia by Mr. Henry Poole, who has been sent to that island to survey a proposed line of railway from Halifax, to connect with the Canadian main railway. He says, "Beneath our workable coal seams I have met with a layer of compact bituminous shale, which yields by experiment 16,000 ft. of gas to the ton. When held to a candle it burns freely, drops off like pitch, and smells like burnt beef—specific gravity, 1.101. I think it might be worked to advantage for making paraffine oil. I am anxious to know the best mode of distilling it, and of obtaining the oil. In the *Mining Journal* of Sept. 25, I saw an article on the Kimmridge coal, and, if possible, should like to obtain the particulars of the plan of distillation adopted." Any information on this subject from your correspondents will be esteemed a favour, and be responded to.—G. H.

WHEAL BRAY.—In reply to the enquiry respecting operations in this mine, I beg to state that at present we are sinking the engine-shaft, which is just completed to the 80 ft. level, the sinking of the last 20 ft., of which was performed in five months. In about six weeks we shall be cutting the lode in this level. We are also driving the 50 ft. level east from the engine-shaft as far as possible towards the ore ground laid open in the 30 ft. level. In addition to this, we are sinking a winze below the 30 ft. level, 40 ft. to the east of the end just mentioned, on the side of the lode. This winze is some 7 fms. below the 30 ft. level, and the lode when cut through near the bottom is worth 10s. to 12s. per fm., and changing from black to grey and yellow copper ore.—S. BENNETTS: Dec. 8.

WHEAL ZION.—I happen to hold some shares as a trustee in this mine. I was accustomed, through the medium of your Journal, occasionally to read the reports of the meetings. I thought when we purchased the Glee land that a better day was dawning for us. For a long period I have observed no notice of the mine. Probably some of your correspondents may inform me whether Mr. Price has put his long-threatened motion into effect, of winding-up the company.—D. H.: Bath.

GOLD REDUCTION.—In your Notices to Correspondents, in last week's Journal, a "Mine Proprietor" wishes for information respecting my patent process for reducing auriferous quartz, and other substances. I beg to inform him, and others, that full information has been given from time to time in your Journal upon the mode of operations, and when and where large trials were made, and in every instance with the most unqualified success. In another part of your Journal, in a letter under the signature of "An Old Smelter," the writer (whoever he may be) seems to be fully conversant with my process, as his observations are perfectly correct, and under these circumstances it would be useless for me to occupy the valuable space in your columns with explanations which can be better given to any person who is interested in the question of Gold Reduction by my process either by communicating with me personally or by letter, at my laboratory.—CHAS. LOW: St. James-road, Holloway.

WHEAL GYNNES.—The object of the concourse of the late meeting, however, appears to be to admit claims which had been disallowed by the Stannaries Court, and to make a call, so as to afford a double handle for the said creditors to take in hand any unfortunate shareholder they may select for process. But has a clique in any company power to make valid against the whole body of shareholders claims which have been disallowed by the powers specially authorised to determine such matters? Why were the circumstances, as they transpired before the Stannaries Court, kept in the back ground? That Court has power to settle all the matters of this and every such company within the limits of its jurisdiction, upon equitable grounds. But the judge may, if he thinks it advisable, leave the task to the Court of Chancery for settlement. Until he has so exercised himself, the affairs of the company, as it appears to me, can not be taken into Chancery, and it only remains for the shareholders to take such steps, for their mutual protection, as shall ensure the full powers of the Stannaries Court being brought into effect in the case of this mismanaged adventure.—E. W.: Dec. 8.

WHEAL GYNNES.—In answer to "Your Reporter's" letter of last week, referring to the meeting of the above mine, held on Nov. 17, I would beg of you to observe that no such argument was used, "that, in consequence of the Decree of the Stannaries Court, there being no mine, no one was empowered to make a call." It was contended that, as the mine and machinery had been taken possession of, and the materials sold by the Registrar of the Court, and the proceeds divided among the claimants, he, having the winding-up of the affairs of the company, is the only competent person to make a call for any balance remaining unsettled (which, in all probability, will be done), having the power to fix the contributions and the amount per share. The statements offered at the meeting were grounded upon the opinions of two solicitors, who have had considerable practice in the Stannaries Court, and, consequently, fully capable of explaining the true position of the company.—A SHAREHOLDER: Dec. 9.

WHEAL GYNNES.—I have no wish to enter into the dispute concerning this mine either with the shareholders, Mr. Berry, or Mr. Jeffrey, but in justice to the last-named gentleman I must correct an error Mr. Berry has fallen into, that the meeting was usually called by advertisement in the *Mining Journal*. I had always advocated that this should have been done, as it would have saved the wasteful expenditure incurred by sending out circulars to the shareholders: the latter was adopted, and not the former, which would have afforded greater publicity at a less expense. Before this unfortunate concern is finally wound-up, we may expect further litigation. I can only say that for the benefit of all parties the sooner a solution of affairs is arrived at, and that at the least possible cost, it will be to the advantage of all concerned.—G. M.: St. John's Wood.

GOLD IN ENGLAND.—A "Mine Proprietor" enquires whether any of the processes for obtaining gold in England were carried out? If he would refer to the Journal of 1854, he would there see that Mr. Berton obtained gold from Cornish ores. A company was formed for the purpose of working his patent, of which Mr. Hyde Clarke was then secretary, and probably from that gentleman he might obtain some useful information. At the same period Mr. John Calvert, who exhibited his nuggets at W.D.'s Great Globe, enunciated the theory of gold in all the granite rocks of England, and professed to extract it by means of electricity. There is no question that gold has been found at Dolgelly, in North Wales, in the last lode there, but whether this is continuous is a matter of speculation. Mr. Josiah Harris was some time there, and I believe while he had the management of the Frodsham Works his magnets related so as to obtain gold. It is to be deplored that, owing to the apathy of the public, the inventions of these gentlemen have not been fully tested, and their merits known. While thousands of pounds are thrown away on foreign adventures we neglect native talent.—J. B.

IRON IN SUSSEX.—As a Sussex man, I felt interested in your article of last week upon this subject; but I do not find any mention of the ancient workings in Horsham Forest, of which vestiges still remain. About between Glenfield and Rodgwick there is a building called "Furnace House," from the same cause, about which, and in the neighbouring fields, cluders, &c., are still to be shown. The refuse from these works were used for the purpose of repairing the adjoining roads, of which there are many indications existing.—F. BARRY: Fittroy Works, Euston-road, Dec. 10.

MANUFACTURE OF STEEL.—I have read the letter of "One Interested" in your last Journal, and certainly think that if a company were formed—the mutual understanding between the patentees being first obtained—the public would readily subscribe the necessary capital.—J. M.: Newcastle.

LEAD.—A short time ago there appeared in your Journal some comments on the article "Lead," written by Dr. Muspratt in his *Dictionary*, and "A Lead Smelter" enumerated some substances of which it would be of great service to the smelter to know the composition, which the Dr. had not noticed at all; and a Mr. Tison, of London, offered to supply the desideratum, if samples were forwarded to him, and publish the result in your Journal. As I have not seen any publication of the kind, may I enquire if Mr. Tison has been supplied with the samples in question? because if he has not, I think those who have the means of doing so should not lose such an opportunity as he offers.—V.A.

CARBONACEOUS VEIN MINES.—We cannot insert the communication from Mr. J. E. Jones, Camborne. The charges against Mr. W. Vawdrey are of far too personal a nature, and the letter altogether unfitted for publication.

MR. SQUIRE'S PROCESS OF PREPARING ORES FOR REDUCTION.—Messrs. Johnson and Sons present their compliments to the Editor of the Journal, and beg to say that they do not answer any notes in a public Journal relative to the affairs of their employers without their full consent, and that it is a rule of their house not to ask such permission until such affairs have been made public by the proper persons. Messrs. Johnson and Sons beg to refer the readers of the Journal to the approaching meeting of the Quartz Reduction Company, where they have no doubt the correctness of their assays will be fully discussed.—Basinghall-street.

MR. A. ENNOR, on Pengenna, North Wheal Robert, East Wheal Russell, &c., reached us too late for this week's Journal.

GOVERNMENT SCHOOL OF MINES.—"Miner."—The requisite information may be obtained by addressing a communication to Mr. Trenham Rocks, at the Museum of Economic Geology, Jernyngham-street, S.W. The lectures commence in October, and generally terminate in the middle of May.

MOUNT CARBON MINING COMPANY.—I had anticipated that I should have seen some notice of the proceedings of this association. We had a president and directors, then a committee of investigation, afterwards we were told that a capitalist had advanced a large sum of money, in order that the works should be carried out. Mr. F. W. Bennet was one of our directors; owing to circumstances which it is not necessary here to allude to he retired during the past year. Surely by some person a statement ought to have been put forward as to the cause of the suspension of the works. We have heard in California of several undertakings being mortgaged. A letter appeared some time since stating that neither the captain nor the miners had been paid by the Chancellorsville Company. I have always advocated that it was better that English capital should be disbursed in British enterprise. If, however, individuals think fit to embark their money in foreign speculations, at least they ought to fulfil their engagements, and keep our name and honour intact. In several instances which have lately come to my knowledge I regret this has not been the case. With regard to the Mount Carbon, as the shares were soon broadcast over the country, I think it is only due to the proprietors, scattered as they are, that some information should be afforded to them through the medium of your widely-circulated Journal.—B. J.: Glasgow.

ALTEN MINING ASSOCIATION.—Recent accounts have shown us that the property is in a good condition. We now know the causes which have led to its temporary depreciation: let us avoid them for the future, and restore to old Alten its ancient prestige.—W. B.: Cornhill.

NEW TRELICK MINING.—Capt. John Prince's report, in last week's Journal, should have read thus:—"Our next sampling, which will be larger, and most of the ore better than the last, will take place on the second Tuesday of this month."

TREVELTHICK'S FIRST LOCOMOTIVE.—"G. A." (Turo).—The diagram referred to is that of an engine made by Trevelthick two or three years before that which was used on the common road in Cornwall. It is published at the *Mining Journal* office, and will be forwarded through the post upon "G. A." remitting 12 receipt stamps. A diagram of Stephenson's First Passenger Locomotive is published by Mr. Dawson, chemist, of Newcastle-on-Tyne—the price is about 2s. 6d.

CARDIFF SOUTH EGG MINING COMPANY.—Absence from the mine prevented my seeing your Journal of Nov. 27. In answer to a "Would-be Miner," the offices of this company are 3, Newhall-street, Birmingham, where every information may be obtained.—W. G. H.: Ponthryd-fendiged.

ROYAL SANTIAGO COMPANY.—In reply to your correspondent, and as the advocate of a poor orphan who has had invested nearly 2000l. in this property, I agree with him that the interests of the present proprietors claim the first consideration, and in the event of any re-arrangement of the company ought to have their amount in free shares. I propose that the shares be 20,000, limited to 5s. each, the 7000 to stand as paid-up shares, which will give a value of 35,000l. for the mine, houses, materials, &c., and which is far below the real value thereof, but the last call should be returned to those who have paid it.—A SHAREHOLDER.

STEAM-BOILER ASSURANCE COMPANY.—"F. A." (Turo).—It will be seen by the advertisement in last week's Journal that Mr. Longridge will undertake the duties of chief engineer. The company, we believe, will be ready for work at the commencement of 1859. We shall be enabled to publish further particulars in our next Journal.

QUARTZ REDUCTION COMPANY.—In your last Journal I observe a communication from Mr. W. J. Vian, the secretary of this company, stating that a letter concerning the reduction of the quartz belonging to this association was published without his sanction. In my opinion, we have at present only two things to consider, as the directors afford us no prospect of ever obtaining a dividend. Mr. Squire states we ought to be the richest company in the world; and says that the brown oxides in our quartz contain gold. Col. Kennedy, when he went to Walworth, said he was convinced of the feasibility of the project. Mr. J. H. Clement, a practical man, at the London Tavern said Mr. Squire obtained gold where he could not; and it must be borne in mind Mr. Clement is no mean authority, as, while in the service of the Nouveau Monde Company, he mentioned that he walked over the precious metal. I would now ask what is the cause of this delay? Is the property mortgaged; or are we to lose it, like the Anglo-Californian, by a transfer to a Kerry miner? Surely neither Mr. Vian nor any gentleman at the board can imagine that we shall ever advance another shilling in order to realise the Tantalian fortune, which we have been expecting this last seven years. Let the remaining funds we have been employed in testing the value of the process of Mr. Squire. I candidly confess I have no great faith in its success, nor have we shall ever attain profitable results from California. I wish, however, that the state of suspense we have been in for so long a period should be terminated. Our present capital is inadequate for any useful purposes, and, therefore, the sooner the company is wound-up, or set going in the flourishing manner Mr. Squire anticipates, the better for all parties. I and several of the other shareholders wish to arrive at this knowledge—Is our little investment entirely gone; or are we to be rich men?—P. E.: Exeter.

TREWANS UNITED.—With reference to the enquiry of "B. L." (Bath), I beg to state that as soon as the engine is sold a small balance will be divided; but I have not had an offer for the engine, though advertised several times in your Journal and in the Cornish papers.—WM. RICHARDS: Redruth, Dec. 8.

EAST HUSSELL.—I observe that Capt. Goldsworthy has very properly corrected Mr. Ennor as to the height of the backs from the 60 to the 55, but the captain generously says nothing as to who is to blame for any mistake which may have been made. Now, I would mention that it was done before Capt. Goldsworthy had anything to do with the mine, and during the management of the agent so strongly supported by Mr. Ennor some time ago.—R. S.: Trevelthick, Dec. 8.

WHEAL GYNNES.—Mr. A. Jeffrey's letter has been received, and is under consideration.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, DECEMBER 11, 1858.

"It was a beastly hole for any human being to go into," is the graphic description of the Cae Colliery, which, according to the local papers, was given by Her Majesty's Inspector of Mines in his evidence to the coroner's inquest on the bodies of the ten hapless men who were drowned in this pit. We are further told, on the same high authority, that there were no plans kept, and that the rules had been entirely disregarded. The most extraordinary piece of evidence, however, is that in which the reporter makes the Inspector say—"the person who managed the underground works must have known that to approach those old works was a dangerous operation without bore-holes," and afterwards adds—"in the present instance DAN FRANCIS, who had undertaken the underground management of the pit, had had his life sacrificed to the accident, which clearly showed that he had great faith in his opinion that they were a great distance from the water in the old workings." It is not for us to estimate lightly the logical acumen of a Carmarthenshire jury, but we cannot but fear that they had some difficulty in reconciling such paradoxical evidence, for if poor FRANCIS "must have known that it was dangerous," how does the mere fact of his having been killed by the accident "clearly show that he had great faith in his opinion that they were at a great distance from the water in the old workings?"

If such were really the evidence given to the jury by one of Her Majesty's Inspectors of Mines, we are at a loss to conceive of what possible use such evidence is, unless, indeed, it be to puzzle and perplex a jury which is sworn to give a true verdict according to the evidence.

The inundation of this colliery resulted solely from the most heedless and culpable carelessness, to say the least of it. Although no plans belonging to the lessees were in existence, it appears that a plan was kept by the lessor, to which access might have been had. So recklessly were the works conducted that the east heading had actually been driven to within 8 in. of the old workings, so that if the water had not burst in from an old top-hole, it must inevitably have done so in the heading. The men were thus exposed to almost certain destruction, without even the slightest efforts being made to avert it. In addition to this we are complacently told by the Inspector that the rules had been entirely neglected, and that the pit "was a beastly hole for any human being to go into."

Had we not been told this, had we not official authority for its truth, had

not ten human lives been sacrificed as the natural and inevitable consequence, we should have thought it to be incredible. That a colliery should be permitted to be worked in such a state, and under such circumstances, is most disgraceful. A more wanton disregard of the ordinary means of safety, and a more heedless sacrifice of human life, we are unacquainted with, although well read in the sad history of accidents in mines. After obtaining the Inspection Act, which amply provides for the prevention of such a state of things, we confidently hoped for a diminution of accidents, and an improved system of conducting colliery workings. And we could not but be disappointed that the provisions of the Act are such as to compel this improvement, were the law only administered with ordinary intelligence and energy.

It is at best but an ungrateful and distasteful task to find fault with public officers, more especially as we for many years, amid great opposition, urgently advocated their appointment, yet the deep sense we entertain of public duty impels us to comment freely on their public conduct, when we deem it imperils the interests of humanity and the success of a measure we have so much at heart. As regards the Inspector for South Wales, we were more than ordinarily reluctant to say one word of censure, inasmuch as we were honestly opposed to his appointment to the office he now holds, and did not withhold the reasons of our opposition from our readers. After having done so we were disposed to do him full justice in his executive capacity, and should have rejoiced had experience proved that our objections were unfounded. It is, therefore, with regret that we refer to the inundation of the Cae Colliery, to the eruption of noxious gases into the Primrose Colliery, and to the explosion in the Cyfing Colliery, all of which have recently occurred in his district, and to be obliged to add that in none of these instances, according to the reports, had there been any previous inspection of these collieries by Mr. EVANS, whilst in every case his evidence shows that these fatal accidents might have been avoided had the ordinary means of prevention been observed.

To leave no doubt on this subject, every one versed in mining will acknowledge that the prevention of the Cae inundation was practicable, and that had inspection taken place before the accident it would not, or at least ought not, ever have happened. We are not, therefore, straining an argument when we say that the loss of these lives is to be attributed to non-inspection.

In the Primrose case, the cause of the accident has been removed, as suggested by Mr. EVANS; it is clear, therefore, had previous inspection taken place, and the same measures recommended before the accident, 14 lives might have been saved.

Again, if we refer to the Cyfing Colliery we find Mr. EVANS denouncing the system of ventilation as bad and dangerous. He recommended certain alterations and improvements, which have been well and promptly carried into effect, and the result, we are told, is that from being one of the most dangerous it is now one of the safest and best ventilated collieries in the district. This being so it can scarcely be denied that the sacrifice of six lives in this instance might have been prevented by an inspection previous to the explosion.

It thus appears that 30 lives have been lost, which might in all probability have been prevented had the collieries been, as we contend they ought to have been, properly and efficiently inspected before the occurrence of these lamentable accidents.

It is important to enquire who is to blame for this terrible waste of human life. The owners and managers are doubtless highly culpable, but the grave responsibility does not rest with them alone. Influenced by a deeply-felt necessity, the Legislature gave the coal miner additional protection to that he naturally derived from his employer, in order to screen him from the consequences of the ignorance and incompetency of some of his masters, and invested the Inspectors of Mines with ample power to compel the adoption of all requisite measures to ensure the safety of the colliers' lives. Seeing, therefore, that the Inspectors have the power of using means for the prevention of accidents, it is clear that if they neglect their duty they are, morally at least, as responsible for the loss of lives as the owners and managers are.

It may possibly be urged in extenuation in this instance that the Inspector for South Wales has such a large district that it is impossible for him to visit all the collieries in any reasonable time, and that of necessity, therefore, many of them must remain uninspected. Were this really so, we believe a representation to the SECRETARY OF STATE would speedily cause this evil to be remedied. But we contend that the whole of the collieries in Mr. EVANS'S district, which are 256 in number, might be inspected at least once in the year, without overtaxing his industry, or expecting more from him than what is easily and cheerfully accomplished by Mr. HENLEY. And how it happens that in every instance mentioned there had been no inspection by Mr. EVANS previous to the occurrence of fatal accidents, although Mr. EVANS has been three years in office, we are at a loss to conceive, and shall be most happy to learn.

This subject involves interests of too much importance to be suffered to pass unnoticed, and we trust that it will not be disregarded by our Legislators in the ensuing session of Parliament, but that means may be taken to put the public into possession of such data as may be obtained by correct returns, or by a Parliamentary Committee, which may be of essential service in improving the law on its re-enactment of 1860. At present its administration is unquestionably defective, and whether this can be remedied by appointing a MINISTER OF MINES or an INSPECTOR GENERAL to superintend and control the conduct of the Inspectors, or by the adoption of some other means, we leave for the consideration of the public and the wisdom of Parliament to determine.

The growing magnitude of our Australasian trade is fully evidenced by the annual returns just published by the Government, and in reference to which we give some statistics in another article. The gross amount of trade carried on to and from between the colonies and the United Kingdom was about 29,000,000l. for the year 1857, which consisted of 18,610,173l. in the shape of general merchandise, 10,000,000l. as precious metal, principally from Victoria, and nearly 400,000l. as copper from South Australia.

Considering that the metallic resources have been produced by unskilled labour, and the vast riches of these colonies being still undeveloped, it is surprising that such great results have been arrived at; especially when it is borne in mind that there has been a total absence of railway communication to the mining districts—such as Ballarat, Bendigo, and Castlemaine in one colony, and the copper districts in the north of South Australia in the other. These drawbacks, however, will very speedily be removed, for there is evident determination on the part of the local Governments to promote railway enterprise, apart from the lines undertaken by themselves; therefore it is impossible to calculate the length to which mining enterprise may yet be carried, and the consequent increased exports of the various metals which must be the inevitable result, without considering the necessary augmentation which must follow in the agricultural and pastoral productions. The group of our Australasian colonies, taken as a whole, and in their varied description of produce, is undoubtedly the most important, commercially, of England's possessions, and, consequently, presents the best field for the employment of British capital.

One of those cases which essentially indicate the morbid aptitude of a certain class of men to affix the stigma of sharp practice and unfair dealing on members of, and persons connected with, the Stock Exchange, came before the Court of Aldermen on Tuesday, Sir R. W. CARDEN presiding, in the absence of the Lord Mayor.

The allegation promoted by Mr. ISAAC SOLOMONS, of 71, Leman-street, Goodman's-fields, against Mr. FRANCIS WORRELL STEVENS, of No. 3, Royal Exchange, involved a charge of the most serious consequence. The petitioner, after citing several business transactions in which he had employed Mr. STEVENS as his broker, and asserting his belief that he had in the purchase of various shares and stock been unfairly and knavishly dealt with, wound up with the formal accusation that the respondent had defrauded him of a sum exceeding 3200l. Now, such an allegation, publicly and deliberately made, would, it can well be conceived, affect the character of any business man, even if successfully rebutted, for it unfortunately happens that, however innocent and faultless a person may be, once being before a court of justice to answer such a charge, his character seems to be treated as public property, and he is put daily and hourly on his defence. It, therefore, requires something more than a mere acquittal, a something of sufficient weight to crush at once the morale of the accusation, and give to it the notoriety of calumny and crime. This Mr. STEVENS, ably advised, has thoroughly succeeded in effecting. His response, or rather defence, is one of the most straightforward, yet legally ingenious, documents that has come for some time under our notice, and was calculated to achieve what it did—the twofold object of not only bearing him harmless, but also of inflicting deserved punishment on his accuser. The decision of the Court, thus induced, will do much to correct the growing tendency of job-

being speculators to revenge themselves for their losses on the brokers and City men whom they employ. It will show those wretched people they must not on slight and frivolous pretence drag a man before the public, and endeavour to blast his character by unfounded and vindictive allegations. When a broker really is guilty of misconduct, the law against him is sufficiently sharp, short, and decisive to meet every exigency of the case, but in cases similar to the present the successful defence of Mr. STEVENS has insured to City men of business a forensic protection, stable, sound, and invaluable.

Mr. HANCOCK, the legal adviser of Mr. STEVENS, with consummate ability and tact, elicited the proof of perjury against SOLOMONS, which at once threw discredit on the whole of the allegations in the petition, and leaves us at liberty to assume that the respondent's version of the affair is the true one; and Alderman COPELAND, in commenting on his evidence, stated that "nothing more frightful ever came before the Court." The result points the moral: the petition of SOLOMONS was dismissed, and the City Solicitor was ordered to indict him for wilful perjury.

OUR AUSTRALIAN TRADE.

By reference to the statistical documents published by the Government in connection with the trade and commerce of the country, and considering our Australasian possessions specially, we find that the total amount of imports from these colonies during the past year of 1857 was 5,815,305*l.*, without reference to gold, which of itself was about 10,000,000*l.*, and from these documents it appears that the aggregate for the year 1854 was 4,301,868*l.*, consequently showing that there has been an increase during the last three years of 1,513,437*l.* The exports for the same period of 1857 gave a total value of 13,175,125*l.*, whilst in 1854 it was 13,405,986*l.*, so that last year was less by 230,861*l.*, thereby indicating the advance made by these colonies to provide much of their own requirements. The different colonies, taken individually, show that the imports from Victoria in 1857 amounted to 2,472,479*l.*, and the exports thereto 7,511,110*l.*, being 6,649,286*l.* British and 861,824*l.* foreign goods. From New South Wales the imports were 2,035,386*l.*, and the exports thereto 3,596,595*l.*, being 3,130,709*l.* British and 465,886*l.* foreign goods. From South Australia the imports amounted to 653,180*l.*, and the exports thereto 988,610*l.*, being 913,117*l.* British and 75,493*l.* foreign goods. From Tasmania, the imports were 563,113*l.*, and the exports thereto 594,979*l.*, being 509,242*l.* British and 85,737*l.* foreign goods. From Western Australia, the imports were 43,927*l.*, and the exports thereto 75,627*l.*, being 65,740*l.* British and 9887*l.* foreign goods; and from New Zealand the imports amounted to 157,220*l.*, and the exports thereto 408,204*l.*, being 364,430*l.* British and 43,774*l.* foreign goods.

We have already mentioned that the imports of gold are not included in these figures, but the exports of copper and other baser metals from these colonies form part of the aggregate sums. It is worthy of mention that while the production of the precious metal from the gold mines of Victoria have not advanced since 1854, the yield of copper from the mines of South Australia have considerably increased, the returns showing that the total value of copper imported in 1854 was 99,937*l.*, whilst in 1857 it amounted to no less than 380,257*l.*

A GOLD REVIVAL.

To private enterprise are we indebted for some of the most useful applications of the arts and sciences, and it would appear that mining in its most subtle nature is also destined to be again operated on through the same source. This is certainly but renewing an old labour, and possibly those griefs and disappointments to which we have had a few years since so frequently to refer; but, nevertheless, the spirit of speculation having taken possession of two or more private individuals, the auriferous deposits of the sister isle are selected as a test for their capital, skill, and perseverance.

It is almost venturesome to write on the British gold question at the present day; and, after the many failures from which it has derived such unenviable notoriety, it really looks like temerity itself to "prospect" even the most favoured spots of our home gold tracts.

The adventurers on this occasion have the merit of fortitude, if not of wisdom, in their choice of an industry, and while wishing for them that good fortune which is said to attend the bold and determined, one cannot help feeling nervous about the results. If, however, as is alleged, some peculiar process of extraction will be brought to bear on their labour, the doubts and fears are somewhat lessened, and all will rejoice at the solution of a long "vexed question." Still, in the absence of all knowledge of their *modus operandi*, it being kept for the present an *occult science*, we must subject all hope to the strict rules prescribed by our experience of the past. At the same time, no one will pretend to call the exploring for gold in Ireland a mere chimera; there is abundant evidence of the existence of auriferous deposits. On the estates of the Earl of Wicklow, and in the localities of Ballintemple, Killahur, and Ballinval, in the county of Wicklow, gold has been found in considerable quantity, and one nugget, many years ago, was discovered which weighed 22 ozs. Other pieces, of from 5 to 9 ozs., also rewarded the gold-seekers of the day; but, on the whole, it was computed the expense of the labour exceeded the returns, and to such an extent that "as dear as Wicklow gold" became a local proverb.

It has been advanced very gravely that this country can afford to leave whatever mines of precious metals she possesses untouched and unexplored. This is, however, taking but a very narrow view of a great question. On the contrary, every community is bound to develop as fully as possible the resources of the position in which it is placed, and no country can afford to leave any one of them unexplored. Such neglect inevitably brings its own punishment; and should it fortunately occur that a new light will be thrown on gold mining by the energies and abilities of the private adventurers now alluded to, who can say what public good may not arise from their industry, and what discoveries of the precious metal may not be made in our mineral districts.

It is, we are told, to "utilise" some newly acquired knowledge of the principles of gold extraction that this undertaking has been decided on; and as the adventurers ask the public for nothing in the shape of capital, they hold themselves somewhat independent of "note and comment" upon their proceedings. In this they may be, as men who possessing means have a right to do what they like with their own, not far out; but example being very catching, it is our duty to suggest caution before any return to the old system of gold prospecting in this country should be hazarded. Although possessing the information, we refrain from mentioning the names of the gentlemen about to try their fortunes in the gold mines of Ireland, and for obvious reasons defer alluding to the localities chosen. As they are providing themselves with the best mechanical appliances, the adventurers seem to couple the sagest prudence to their signal courage, and deserve success.

The field they are about to enter upon is as interesting as it is extensive; and as there is no competition whatever to be encountered they will have the whole game to themselves. We hope sincerely they go in to win, the more particularly as the general mining interest of the United Kingdom would be considerably enhanced by their being triumphant. Nor do we hesitate to say that the stimulus of such success is at this moment much wanted. Anything to dissipate the existing languor is to be earnestly desired.

When the Government worked the gold mines in Ireland the results were decidedly unremunerative. In two years 945 ozs., in value 3675*l.*, were registered to its credit, and as the expenses were far in excess of profits the mines were abandoned. Other attempts were subsequently made by companies, but the speculation in every instance proved a failure, and in some instances a rather expensive one. However, it may so occur we shall be found wiser in our generation, and that the great improvements which have within a few years taken place in science will remedy those evils to which the old gold miners had to succumb.

It is one consolation that, should the attempts now about being made in the gold tracts prove futile, Ireland is rich in other minerals, to which enterprising capitalists can profitably direct their attention. The facture of peat charcoal for various purposes is also becoming a source of great industry, and we hope of prosperity, to all engaged therein. The industrial uses of this production are found to be various and valuable, and its application as fuel under a new system has, we understand, been found most effective and economical. Mining in Ireland, generally speaking, where it has been carried on in a business manner, has been remunerative. There is, of course, room for improvement, and as there is full scope for adventure, the case is not hopeless. However, let us hope for the well-being of every legitimate undertaking in mining. Steadily and perseveringly followed, it is for the most part a successful industry; and as the renewal of

gold-seeking, on which we have offered a few passing comments, is said to have the countenance, if not the adhesion, of a scion of a noble house, it will be made under protective auspices, more than ordinarily encouraging.

MINERAL WEALTH OF IRELAND:

APPEAL TO LANDED PROPRIETORS AND NATIVE CAPITALISTS.

We have continually advocated the prosecution of the mineral resources of Ireland, believing, as we do, they will be found to add in no small degree to the improvement of the social condition, as well as to the wealth, of that highly-favoured isle. The enormous deposits of almost every useful mineral production lying unheeded have been proved beyond all doubt to be capable of being worked to a profit. Whence the apathy displayed by Hibernia's otherwise enterprising sons is most marvellous: had the advantages which they possess been within the reach of almost any other people, long since would they have been most assiduously cultivated. No wonder the gentry complain of poverty on the part of their tenants, when so little employment is afforded to their teeming population as agriculture of the most wretched description on the greater part of the mountain districts offers. No wonder the villages wear that miserable aspect the pittance of wages doled out must necessarily engender. No wonder the poor feel oppressed. All our English and Welsh mining districts would have been similar had they been equally neglected. The great complaint has been the cry of "want of capital;" that, no doubt, has been in a great measure one cause, but that is not the only one,—lack of encouragement on the part of landed proprietors to miners, and a want of energy amongst the Irish capitalists and merchants, have been the principal. Where Irish mining enterprise has been undertaken, it has generally been by Englishmen and English capital; and it is well known that some of these parties are reaping vast profits from their adventures. The most casual observer would have supposed that the mines of Wicklow, lying as they do within a few hours' ride of the metropolis of the island, and with the splendid examples of good fortune to English proprietors who have embarked therein, would have caused sufficient excitement for the Irish mercantile community even to have bestirred themselves to activity, and have used every endeavour to secure to themselves that which is their natural birth-right. It is useless to state that capital does not exist in the country for such purposes; that which does, if employed in mining, would soon double itself, and would not only extract from the soil its latent riches, adding, as such does, to the general wealth by the vast commerce created in the practice, but the success which has been already proved, and in all human probability must accrue, would attract additional capital from all parts of the world;—a bright page would then be opened in the history of Ireland, and a glorious future indicated.

But whilst thus endeavouring to direct attention to these vast sources of industry and wealth, we again implore the Irish gentry and merchants to look to their own true interests; not to be callous or indifferent to their welfare; not to wait till the stranger comes in, sets the example, reaps the reward, and takes the prize out of their hands. How many thousands of pounds have been realised in Ireland by strangers that, had Erin's sons evinced proper spirit, might have been retained in that country, to its immense advantage as a nation, by extending comfort, civilisation, and happiness. We beg them to remember the proverb—"God helps those who help themselves." Even amongst the ancients so alive were they to the advantage of self-confidence, and to the necessity of self-action, that one of their writers exemplified most powerfully its effects in the fable of JUPITER and the clown. We sincerely hope the gentlemen of Ireland will be up and doing; will put their shoulders to the wheel, whip up their steeds, display energy and activity, then they may rely on assistance they would not otherwise obtain.

The country is known to possess every facility,—good ports and harbours, which should be crowded with vessels carrying produce to and from the mines; water-power of immense value, good roads, a population who make most excellent miners, and who are most anxious to become such, who work cheaply and well when adequate encouragement is given. Should the mines be vigorously worked, the cabin and mud-hut sparsely sprinkled over the hills, or huddled together in filthy hamlets, would give way to thriving towns, with their comforts and cleanly improved habits,—content and happiness occupy the place of wretchedness and misery. Think not this is an overdrawn picture. It has been proved to be the case in many instances, and that, too, in so rapid a manner as to create surprise and admiration. Within 30 years the mining districts of Cornwall have realised all this—aye, more,—and are hourly progressing.

We are thus explicit and energetic, as we hear there is at length a probability of a Dublin company being formed, under the most favourable auspices, for the purpose of prosecuting the good cause; and we feel we should be wanting in our duty to that we have so long advocated were we now to neglect the opportunity. The company may rely on our best wishes for its success, and on our hearty co-operation, in furtherance of which we call on all Irishmen, for the sake of their country, for themselves, and for society in all parts of the United Kingdom, to come forward and support the undertaking, when most assuredly their consciences and their pockets will be alike rewarded.

THE MINING AND INDUSTRIAL INTERESTS OF CORNWALL.

[FROM OUR CORRESPONDENT IN WEST CORNWALL.]

DEC. 9.—The prospect of the mining interest improve as the year approaches to its close. Advances from the manufacturing districts state that the trade in metallic manufactures is gradually improving. If the shipping interest were not so dull, and so many ships unemployed, there would doubtless be a greater demand for sheathing copper, which is a very important branch of consumption. Notwithstanding this unfavourable circumstance, there is a good home trade, and the price of copper, there is very little doubt, will shortly advance. The standard for ores at the present time cannot be complained of; it is very much more in favour of the miner than it was at the corresponding period of last year. At the sale last week (Dec. 2) a produce of 6½ per cent. made 6*l.* 3*s.* per ton. At the sale on Dec. 10, last year, a produce of 6½ realised only 5*l.* 10*s.* per ton, making a difference at the sale of this year of 13*s.* per ton in favour of the miner. Several of the copper mines have lately been looking better, and the prices of shares in tin mines have also an advancing tendency, it being tolerably evident, from the improving position of trade, that the price of tin will continue to advance.

There have been many enquiries for mine shares, and business has been transacted both in dividend and progressive mines. The improvement in East Basset seems to have had some effect in exciting a speculative spirit. Soon after I dispatched my letter last week it was announced that the lode in the 80 had further improved, and was worth 100*l.* per fathom, upon which shares at once ran up to 160*l.* and 165*l.*, but they have since been a little flatter. The neighbouring mine of Copper Hill is also stated to be looking better. At Wheal Basset meeting the 94th dividend was declared. The profit on the two months was 3144*l.*, and the dividend was 6*l.* per share, the same as at the October meeting; leaving a balance to credit of next account, 1461*l.* The ends of the mine are not at present producing more than about 7 tons per fathom, but there are some excellent stopes and pitches, yielding considerable quantities of copper ore, and there is a likelihood of improvement at different points, where the lodes have a promising appearance. As the workings in this mine extend over eight lodes, there are very good chances of discovery on one or the other of them. The great question, however, is—What will the mine make in depth? The report informs us that at the deepest point—the 130, where they are preparing to fix a plunger-lift—the lode is large and spotted with ore, but not sufficient to value at present. The agents, however, will soon open on the lode, and ascertain its value. Another point is Vaddon's lode, which has been a rich lode in this mine. The agents are cross-cutting towards this lode in the 120. Some good ground is also opening on the tin-producing lodes, and from this part the shareholders are likely to derive more profit. South Frances is looking well, and the shares are likely to go up. The 114 east is worth 30*l.* per fm., and at other points the mine is looking favourable. At West Basset, the 75 west is worth about 20*l.* per fm.; other parts of the mine are as productive as usual. At South Cuan Brea, there is a good lode in the flat-rod shaft, worth from 12*l.* to 14*l.* per fm. An improvement is reported in West Stray Park. Wheal Grenville has a very large and promising lode in the 66 cross-cut, which has given the mine quite a new appearance. West Seton shares have lately been rather flat. At South Seton a call of 2*l.* per share has been made. Gambler shares are about 130*l.*; South Tolgus about 80*l.* Wheal Clifford is producing large quantities of ore. At the United Mines, the ends are yielding about 22 tons per fm. of good ore, and the winzes about 21 tons per fm.

Wheal Providence has lately improved, but shares have very little advanced. Wheal Margaret shares are about 63*l.*; Wheal Margery shares from 8*l.* to 9*l.*

As an instance of the great wealth that is sometimes amassed in the pursuit of mining, it is stated that the late Mr. James Harvey, of St. Day, has left property to the amount of upwards of 300,000*l.* Mr. Harvey was a merchant and a tin and copper smelter, as well as a fortunate shareholder in many mines.

The most important projects at the present time for the advancement of the industry of the county are the Cornwall Railway and the Falmouth Docks. It is stated that the former will be ready for opening in March next, though there are not wanting persons who disbelieve that statement, conceiving that the works are not in a sufficiently forward state to admit of the opening before Midsummer. With regard to the Falmouth Docks and Floating Harbour, 27,000*l.* has been subscribed in Falmouth towards carrying out the scheme, and it is stated that if 40,000*l.* or 50,000*l.* can be obtained in the county the remaining sum required will easily be procured from London capitalists. This measure and the railway are likely to give a great impetus to the prosperity of Cornwall, especially to the western part of the county. The great increase of shipping at Falmouth which may be fairly expected will give rise to a large consumption of all articles of produce, to the special benefit of the landed interest, and the general profit of the trading part of the community, in consequence of the increased circulation of capital in the county.

REPORT FROM NORTHUMBERLAND AND DURHAM.

[FROM OUR CORRESPONDENT.]

DEC. 9.—The Coal and Iron Trades continue in much the same position here as when we last wrote. The coal trade cannot as yet be termed brisk—that is, generally speaking, as many of the colliers are only partially employed; this is the case at some of the collieries west of Newcastle. At the large coking colliery of Marley-hill, and others in the same neighbourhood, some slackness is experienced at present. Many spare hands are to be seen in search of employment, which is certainly not pleasant, especially at this season of the year.

At the Page Bank Colliery the owners are at present engaged in sinking a new shaft. It will be recollected that a calamitous fire occurred here a short time ago, though the result, considering the circumstances, was extremely favourable in the end. The necessity for an additional shaft was pretty generally expressed at that time; when it is completed it will place the works in quite a superior position, and be an immense improvement on the former wretched arrangements.

Mr. C. Carr having retired from the viewership of the extensive collieries at Seghill and Cowpen, in consequence of the sale lately effected at those collieries, his late workmen and friends have presented him with a splendid testimonial of the value of 100*l.*; a few of the wives of the workmen have also presented Mrs. Carr with a testimonial of their respect. It is only just to add that Mr. Carr is held in the highest respect by his workmen and all who come in contact with him. He will continue to manage the Burradon and Hartley Collieries.

Thos. Hutton, a miner, aged 40 years, was employed in the East Pit of Minton Colliery on Tuesday week in removing a "judd," when a large stone fell from the roof and killed him on the spot; and on Saturday week John Hutchinson, aged 20, employed at the screens at Thornly Colliery, went up to the pits heave to oil it, and on his return his foot slipped, and he fell a distance of 30 feet. His skull was severely fractured, and he died shortly afterwards.

The Stephenson Monument is considered of so much importance here that a book has been written on the subject by Mr. Oliver, an architect, in which he discusses the question—What is it to be? We have before made some remarks on this subject when we noticed the proposition that it should in some way be connected with the proposed Mining and Manufacturing College at Newcastle, and we observe that the question is fully discussed in the *North of England News and Advertiser* of Saturday last. We quote here part of the article in that journal, which appears to us to contain valuable suggestions:—"All who feel interested in the Stephenson Memorial—and who is not?—should read the pamphlet in question. We cordially agree with its author, that the monument should be something more than a mere statue. But we have an idea that it might also be something more than a mere statue with a mere architectural covering over it. The name of George Stephenson being known for his practical genius and untiring industry in a pre-eminent degree, a monument to his memory should be characteristic, and not a mere ornament, however imposing. It is proposed to establish a Mining College in Newcastle; might not the proposed monument be connected with such an institution? We would thus give life to the monument, it would not be simply a cold witness to the genius and energy of Stephenson, but in it he would once more live and breathe. His spirit would be communicated to the institution, and would again be useful. Why not erect a splendid building to be appropriated to the great purpose for which Stephenson himself came into existence, and to which he so diligently and successfully devoted himself? Might not his sculptured figure be appropriately placed in the magnificent entrance hall of such an institution, to invite and encourage the genius of the district to become labourers in that sphere of usefulness in which his name has become so distinguished? To carry out such an object would, of course, require a more liberal list of subscribers than would be necessary for an ordinary monument; but if the coalowners of Northumberland and Durham would seriously set themselves to the task they have so long contemplated, we see no difficulties which might not be easily overcome."

We cordially subscribe to those sentiments, and think the occasion a fitting one to agitate this most important subject. The funds, we doubt not, could easily be raised if the coalowners were once unanimous on the subject, and thoroughly roused from their apathy. The Duke of Northumberland's promise of 5000*l.* would figure well in the list.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

[FROM OUR CORRESPONDENT IN CHESTERFIELD.]

DEC. 9.—The Iron Trade continues to indicate a renewed degree of prosperity, and the home demand is much improved. There is also a better enquiry for iron for American consumption than of late. The pig-iron trade is improving, and prices are more firm and regular. Some orders for rails for colonial lines have been received, whilst the consumption for home lines is on the increase. This has occasioned a renewed activity in this branch of the iron trade, and occasioned a greater degree of firmness and regularity in prices than have previously prevailed.

The Coal Trade in Derbyshire is much in the same state as noticed last week. There is great activity on all sides, and work is plentiful and labour very scarce; prices good, and improving. No strikes. What could be more cheering?

In the Leeds district the strike of colliers has been brought to an amicable termination. The reduction proposed was 15 per cent.; that accepted 7½ per cent., and it seems satisfactory to both parties. It was not pleasant for the miners to starve, nor was it agreeable for masters to be in continual receipt of orders which they could not supply, and breaking contracts which they were unable to meet. We hope both parties are now satisfied, and that the day will be far distant when a recurrence of the scenes lately witnessed will be seen.

Satisfactory progress continues to be made in the several progressive lead mines in the Peak of Derbyshire.

The North Derbyshire are pushing forward to complete their plant within the present year, so as to begin the new one with new prospects. Like all great undertakings, there have been several large items of expense which were not originally contemplated; and, as we have before stated, the shareholders must prepare for a further call—probably of 5*s.* per share, perhaps it may be more.

At the Robin Hood Mine (Matlock) half-yearly meeting, Capt. George Walker presented his first report, from which we learn that during the month of April the level shaft, which was in a very dilapidated state, had been enlarged and repaired to the extent of 16 fathoms, and from that point a distance of 19 fathoms had been driven in the pipe, or vein, and, although found favourable, it was deemed advisable to sink a new shaft, at a distance of 60 yards westward of the level, in the last 5 fathoms of which several specimens of lead ore were found. From this it was concluded that the present operations might be continued with favourable results, as they were within 5 fathoms of the bearing, where large quantities of lead ore had been raised. It was his intention to explore this ground, and he had little doubt that the expectations of the company would be fully realised. Mines immediately contiguous were yielding considerable quan-

titles of lead ore. The works were progressing at a moderate cost, and the future prospects of the mine are reported to be encouraging.

There was a sale by auction this day at Sheffield of about 100 shares in the Mill Dam Mine, which were forfeited owing to the calls not being paid up. The prices realised were from 11s. to 16s. per share. The agent is busily employed in clearing out some material at the foot of the shaft.

A few weeks since we drew attention to the proposed formation of a limited joint-stock company, for the purpose of effecting the purchase of the valuable freehold estate known as the Wellington Colliery, near Chesterfield. A contract has since been entered into for their purchase at 48,000*l.*, and the value of which has been estimated at nearly 60,000*l.*

THE IRON AND METAL TRADES OF STAFFORDSHIRE.

[FROM OUR CORRESPONDENT AT WOLVERHAMPTON.]

Dec. 9.—The improving tone of the Iron Trade in this locality, as in other parts of the country, appears to be more distinctly and universally felt this week. Most of the leading makers are able to keep nearly in full operation; and although the orders on hand are not large, the advances are promising, and enquiries give good grounds for anticipating a larger demand and better prices shortly. Some of the needy makers who have been compelled to undersell, in order to secure cash, are now not disposed to take orders except at an advance.

The makers of pig-iron are also holding back for an advance, which they hope to realise in the ensuing quarter. As yet there is no advance on 3*l.* 12s. 6*d.* for best hot-blast mine pigs.

In the Hardware Trades there is no particular change, but the tendency is rather towards improvement, although just before Christmas is not the time for the receipt of large orders.

The examination of Mr. Riley, formerly an extensive ironmaster, who failed in Nov. last, is fixed for to-morrow, at the Birmingham Bankruptcy Court. From a balance-sheet prepared for the Court, it appears that the total liabilities on the estate of Riley and Son amount to 320,000*l.*. The unsecured creditors reach the sum of 168,201*l.*, and the liabilities on endorsements are 144,403*l.*, of which 105,699*l.* is expected to come against the estate. The assets leave a deficiency of 210,041*l.*. The personal expenditure since Jan., 1854, is put down at 23,692*l.*. The amount of liabilities on acceptances clearly indicates the class of persons with whom the firm dealt.

There is a strike amongst the glass-makers at Stourbridge, chiefly on the ground that the masters employ a greater number of apprentices than the men think should be articulated. Resolutions in favour of standing out and supporting the men on strike were passed at a meeting held a short time ago at Stourbridge.

A new station having been opened at Briery Hill, on the Oxford, Worcester, and Wolverhampton Railway, some of the leading inhabitants of the town invited Mr. Sheriff, the manager of the line, and several of the officials, to a dinner on Tuesday. The proceedings were of a very harmonious character. Mr. Sheriff stated that whilst the original estimated cost of the line was 1,500,000*l.*, the actual cost was 4,250,000*l.*. He stated that the company was now emerging from the nearly bankrupt state in which they had only recently been placed, owing to the heavy expenditure in the formation of the line.

At the meeting of the Birmingham Board of Guardians, on Thursday, the Visiting and General Purposes Committee made a return relative to the working of the Breeze ovens fixed at the workhouse some time since, on the recommendation of Mr. Peckey. From April 11 to Nov. 12 the slack used, and all incidental expenses, amounted to 300*l.*, and, after deducting the income from breeze sold, the cost of raising steam at the workhouse was only 48*l.* 11s. Mr. Mills did not doubt that the ovens had effected a considerable saving, but thought the experiment should have six months' further trial. Mr. Peckey said that ten months ago he stated to the board that it was possible for them to save the whole cost of producing the steam required at the workhouse, though then it was costing the parish 350*l.* a year. He appealed to the board whether the breeze oven had not fulfilled all he promised, both in respect of its economy and of its smoke-consuming qualities. Mr. Heaton, like other members of the board, was at first very dubious as to the wonders this oven was to accomplish, but now, according to his calculation, he found that the cost need have cost 293*l.* 11s., and the breeze produced had sold for 211*l.*. Allowing 50*l.* for the coal used under the boilers when breezes were not being made, the cost of providing the steam for the workhouse during 35 weeks was only 38*l.*, so that comparing this with the expense before the ovens were erected, there was a clear saving of 5*l.* per week.

LEGITIMATE MINING AS AN INVESTMENT.

BY JOHN ROBERT PIKE.

The Cost-book System, as we have elsewhere intimated, has not yet received that fair share of attention to which we consider it justly entitled, in connection with the progress and well-being of Cornish mining. Long and familiarly known to the mining community in its most ordinary application, the expansive character of its broad and equitable base seems to have been greatly overlooked in the search for legal systems adapted to the growing exigencies of modern business.

Time was when the county of Cornwall contained within its bounds not only the mines, miners, and engineering talent, without which money would have been a useless drag, but the capital, which infused life into the whole machine, giving wealth to the spectator and abundance to the worker. The scene gradually changed, and the mineral wealth of that remote corner of our land was swayed in a large measure by influences, and participated in by individuals, ex-territorial. Underrunning the calendar of time by one decade, we see the vast mineral interests of Cornwall, represented by share property, dispensed in London to the public by the hands of two or three business firms, which have gradually increased in number until now they aspire to the dignity of a corporation. Partly as a cause, and partly as a consequence of this increase in the number of business men, whose time is entirely devoted to the negotiation of mine share property, a steadily increasing amount of money has been flowing into the county of Cornwall from individuals residing without its limits. The number of mines at work has proportionately increased. The old Cornish system of dividing mines into small numbers of shares (say 256) is being gradually displaced by the more modern method of a greater number (say 5000), in deference to the increasing number of investors. As companies have numerically increased, different modes of management have been scrutinised, comparisons have been instituted between the legal constitution of mining and other joint-stock enterprises, and shareholders, in their eagerness to secure for themselves a liability absolutely limited, by placing their affairs within the statutory provisions of a recent Act of Parliament, have, perhaps unwisely, not fairly considered the powers in this direction which they were capable of exercising under the old Cost-book System of management.

That a mining company carrying on its operations within the jurisdiction of the Stannaries Court can be so constituted as to secure limited liability to the shareholders, we believe there can be no manner of doubt; the *modus operandi* must be necessarily left to the legal profession, the only aspect of the subject with which we can consistently deal being that purely commercial. In previous communications we have stated our views as to the necessity now existing for the introduction of limited liability and a paid-up capital in mining for copper, lead, and tin; pointing, at the same time, to the recent Joint-Stock Companies Act as presenting the requisite legal facilities. With its scope and purport the mining public are tolerably well acquainted, and it is, moreover, just now popular. But whilst simply stating the fact that the Limited Liability Act and the Cost-book System are capable of effecting the same object in different ways, we cannot hesitate to express our conviction of the great superiority of the latter system over the former in the prosecution of mining adventures. Under the cost-book we have to deal more with a system of equity than of law; its whole genius being eminently suited to the distinctive peculiarities of mining. It is surrounded by fewer and less intricate forms, is consequently less expensive in its administration, and in matters of litigation secures to suitors more substantial justice, by appealing to a court constituted solely for the adjustment of mining differences. In a word, we commend the Cost-book System to the honest consideration of every one desirous of improving the present constitution of mining companies, as containing within itself all the elements of security and usefulness.

PREVENTION OF COLLIERY EXPLOSIONS.—In another column we publish a description of a safety-lamp, just patented by Messrs. Wilkins and Co., of Long-acre. We have carefully examined the lamp, and find that it is a modification of the Mueseler lamp, there being a trifling difference in the manner in which the air is admitted to the flame. It is well known that in the Mueseler, the lamp in general use in Belgium, the tube through the oil-vessel by which the air is supplied is protected at the bottom by a wire gauze, the bottom of the oil-vessel being sufficiently raised and orifices provided, so that when the lamp is stood on a flat surface the air passes through the orifices and up the tube. When the lamp is suspended the air passes direct through the gauze to the flame. Messrs. Wilkins provide a much larger quantity of air, by employing four large tubes instead of

one small one, and forming the air-chamber so that the protecting gauze is placed over the outer orifices instead of at the bottom of the tube. They employ the ordinary cotton, as in the Davy, and there is no pricker. When a greater amount of light is required they use a dioptric lens, which may be familiarly described as a cylindrical "bull's-eye," the good effect of which may be easily imagined.

GOVERNMENT SCHOOL OF MINES.

Dr. Percy delivered a lecture on "Iron." In his previous discourse on this subject he had told them of the various processes which were practised with this useful metal. He should come to the effects of the hot-blast, and on this head some very important papers had been published by Dr. Clarke. In 1829, with the cold-blast, it took 8 tons 1 cwt. 1 qr. of coals to make 1 ton of iron. In 1830 it took 5 tons 3 cwt., but on this occasion the furnace was only heated up to the temperature of 300 deg. Fahr., while in 1833, when raised to 600 deg., the consumption of fuel to make 1 ton of iron was only 2 tons 5 cwt. 1 qr. In some furnaces the hot and cold-blast were used together. An example of this was seen at the works of the British Iron Company, near Birmingham. Some of these cold-blast furnaces turned out a considerable quantity of iron, and at Dowdals they had produced as much as 27 tons (or 21 cwt.) in a week. In some furnaces they had used cast-iron in lieu of limestone. This was deprived of its carbonic acid. He was not aware whether this had been extensively employed, or, if so, whether it would have led to greater economy by its application.

He would give them an analysis of a Northamptonshire iron ore, which was before them. This contained—graphite, 1.44; carbon combined, 0.81; silicon, 2.98; sulphur, 0.147; phosphorus, 0.936; manganese, 1.098; iron, 92.727. In some iron he had seen as much as 7 per cent. of phosphorus, and in others 3.65 and 3.449. The specific gravity of the ore was 4.022. The "spiegel" glass, or white iron, contained no mechanical carbon, which was graphite, but was thus constituted:—Carbon combined, 3.14; the proportion of sulphur was very small, being only 0.002; phosphorus, 0.64; iron, 89.72. He should further speak of white iron when he came to the subject of refined iron. The temperature of the cold-blast is able to reduce phosphoric acid.

He would now pass on to a subject which was of great importance—the conversion of pig into bar-iron. The difference of this is the carbon, and the separation of this is done on the one principle of oxidation. The process of puddling—one of the greatest discoveries ever made—is due to the late Mr. Cort, who introduced it in the year 1784. Previous to this the iron was brought out in a sort of bloom, and melted with charcoal. Attempts have been made to deprive Mr. Cort of the merit of this invention. It is true that a patent of somewhat similar nature was taken out a little previously, but in this there is a blast, which there is not in Mr. Cort's furnace. The process of puddling was then described as practised in Staffordshire. The iron used was what is called strong forge pig. The furnace was cleared of the tap-cinder. A charge of 4 cwt. of iron is introduced, and 1 cwt. of hammered slag; this is smelted down in half an hour. This is when the thick coat of the ten-yard measure is used. When new mine coal is employed a longer time is required. The hammered slag is spread over the bottom and towards the sides of the furnace. After it is melted the boiling iron throws up a great effervescence, and swells up to a great extent, even as high as the door of the furnace. When near the melting point the pig easily breaks, and it is changed into a pasty metallic mass; it is then separated into 3 balls, each of these weighing 80 lbs. They are then masses of wrought-iron, which afterwards are subjected to pressure, in order to form a coherent mass. When rectangular they are placed under the rolls, and called puddled bar-iron. The time the operation takes is from 1¼ to 1½ hour. The tap-cinder is run off into boxes. A section of the furnace was then shown; the measurements of which they could take at their leisure, if they felt so inclined. The first-place they would observe was very irregular. The furnace is at the bottom of the furnace is an iron plate, protected with built-up or caliche tap-cinder, the properties of which he had previously alluded to. The furnace is constructed of refractory materials, generally of the best Stourbridge bricks, protected by plates and transverse bars. The first-place was 3 feet 9 inches square. The furnace should be provided with a damper, in order to regulate the temperature. When the iron comes to mature the furnace is kept full of smoke. It takes about 22 cwt. of pig to make 20 cwt. of puddled iron; sometimes 21½ cwt. of pig would give the same weight. A good puddler can earn 3*l.* per week, besides paying his assistant, who is generally a boy. When the iron comes to mature the carbonic oxide is evolved, and the gas, being below, is drawn off. The furnace is worked cold the iron is called red-hot. To produce a good iron the furnace must be worked to a high temperature, and occasionally something like pig-iron must be expected to be met with. Previous to the introduction of puddling refining was always used. According to calculations furnished him by Mr. Samuel Blackwell, it took 1 ton 1 cwt. 3 qrs. to 1 ton 1 cwt. 1 qr. of pig-iron to make 1 ton of puddled. The ordinary calculation at Dudley was from 24 of pig to 22 puddled. An analysis of the slag obtained in puddling gave—silica, 15.297; peroxide of iron, 69.144; peroxide of iron, 16.116; oxide of manganese, 2.294; lime, 0.598; magnesia, 0.422; phosphoric acid, 4.537. He had seen in one instance the slag which had 6 per cent. of the tap-cinder contained 38 per cent. of iron; this was formerly thrown away. The puddled iron was subjected to an interior process. In another furnace the slag gave—silica, 33.738; peroxide of iron, 60.840; peroxide of iron, 0.714; oxide of manganese, 0.726; lime, 2.958; magnesia, 0.115; phosphoric acid, 0.491—they would observe that the last item was exceedingly reduced; alumina, 0.318. The slags are sometimes beautifully crystallised. Here was an analysis of slag which had been exposed to calcination—silica, 23.86; peroxide of iron, 39.83; sesquioxide, 26.75; peroxide of manganese, 6.17; this was evidently oxidised in a greater degree than the other; alumina, 0.91; lime, 0.62; magnesia, 0.24; phosphoric acid, 0.43. He would now speak of the yield of puddled bar-iron to that of merchant bar. The process of refining was conducted on a shallow hearth, with the addition of a blast; and the crystals of white iron had in general a beautiful appearance. An analysis had given—iron, 93.14; carbon, 3.07; peroxide of iron, 0.734; silicon, 0.63; sulphur, 0.157; manganese, a trace. A small quantity of residuum had been left—0.53. This had been tried with hydrochloric acid, and gave—silica, 0.30; alumina, 0.14. There was another furnace, which was exciting great attention—the so-called gas furnace. The furnace before them was from one of these, used by Prof. Ekman in his experiments near Gotenburg. The fuel used there could be wood, coke, or coal. They melted at a very high temperature, and required that the furnace should be built of the most refractory materials. They had this great advantage, that they were both refining and oxidising. Dr. Percy then pointed out the construction of the various portions of the furnace. The further consideration of the metallurgy of iron would be treated of in subsequent lectures bearing on the subject.

MINING MARKET.—We have received the following communication:—

From Mr. JAMES CROFTS:—It appears that very few persons, if any, can "look into the seeds of time, and see which grain will grow and which will not." The rate of discount, the rate of exchange, the rate of interest, the rate of the Bank Directors yesterday, in reducing the rate of discounts from 3 to 2½ per cent.; all the world, monetary, banking, and jobbing, including the "press," having been quite taken aback by the announcement, which it really appears was totally unexpected and unforeseen at the time. It is now five years since the Bank minimum was as low as 2½. The effect has been to raise the funds, and to give a sensible impetus to every description of stocks; but the most important one will be the confidence inspired throughout the country, and everywhere, by this assimilation of the Bank rate to the real value of our money, and unquestionably it demonstrates the wisdom of the late Mr. Peel's policy in his own time, and in the present time, as to any adverse check to the growing prosperity of the manufacturing and mercantile interests of the country; and now, therefore, the political economist sees before him the annihilation of all fears as to a sound and safe state of things for it, it is to be hoped, a lengthened period. As to the effect of this move upon the mining market, it is singular that it was scarcely wanting to add to its prosperity, for, except with some transient intervals of dullness, the market has become so decided in demand for all first-rate dividend stocks, and other proximate dividend and improving mines, that the aggregate of business is unprecedentedly large, as will be fully confirmed in the City Article of the Journal. The week has also been prolific of improvements and anticipations in copper, giving increased firmness, without exception, to all well-established and producing concerns, especially the more important ones.

It is necessary to correct a statement made by the writer in a former letter, to the effect that the late call of 10s. per share in North Minerals would be the only one, it appearing that in consequence of the situation of the mine it is exposed to interruptions in dressing the ores by frost, and consequently whilst expenses are progressing, and must be paid, ores cannot be brought to market. The late call of 10s. per share, and the value of a parcel of ore (20 tons) for this week, will give about 800*l.* of funds; there fore, although another call may be wanted, it must be rather remote, and should be regarded when it comes as a mere addition to capital, and not expenditure. These shares are lively, and large transactions have taken place in them, chiefly in the country.

Wendron Consols (tin), in 512 shares, has 24*l.* 7s. 8*d.* per share paid up, and has paid 3*l.* per share in dividends, the last 20s. per share in September; price of the shares, 36*l.* 3*s.* 7*d.* This appears a very sound concern; and as tin has advanced, and is advancing, the shares are worth attention. The last meeting left a balance in hand of 497*l.*. Pitches let in the mine are 14, at 3*l.* 3*s.* 12*d.* 6*d.* in 1*l.*. Persons employed, 47. Charlotte is attracting considerable attention, in 100 shares, in 1*l.* 10s. 6*d.* per share, Cornish copper ore just sold realises 163*l.*, yielding about 800*l.* profit for the month. A much greater rise is anticipated, the status of the mine really appearing to warrant the conclusion. Its position is near the successful one of North Wheal Crofty. Commenced dividends in 1835; at present in abeyance. North Reaker (copper), Camborne, in 700 shares, attracts great attention, has cost 13*l.* per share in workings, and paid 750*l.* in dividends (in abeyance also since 1855); the prediction by very competent parties is that it is fast becoming a valuable property, and shares scarcely to be found for sale favourably preceding inference. A negotiation, it is understood, is in progress to transfer the management of the important mine of St. Day United to London. The prospects of this concern are bright, showing it to be a politic step on the part of the present management to give more facilities to shareholders to attend the periodical meetings, and to regulate and watch its financial and working progress. Wheal Crebor, reconstituted, and reworked by a new company, in 6000 shares, is developing favourably; a lot of cut worth 3 tons per fm. The shares lately were 1*l.* 10s. (and lower), but in great demand at 20s. This mine is assumed to be under first-rate management, and if as successful as anticipated will do credit to a manager of great experience in mines both in England and abroad. Hingstons Down shares, upon reports presented at the late meeting, when a cut of 6*l.* per share was made, rose to nearly 4*l.* per share; but the sanguine action upon them appears not to have been warranted, the price having already receded 25 per cent., and scarcely a buyer. The evil of this concern, which has experienced from the first very considerable vicissitudes of fortune, is in the hard matrix of the lodes, and its consequent very expensive workings; 3*l.* 15s. per share has been expended upon 6000 shares, and 2*l.* 10s. per share paid in dividends. The value of the shares has been at times nothing, and at others fabulous in comparison with its intrinsic worth. So long as the evil of expensive workings remains it can scarcely be considered a mine to invest in. The writer a few weeks since called attention to the low price to a trio of mines—viz. the Wheal Edward, Sonbridge Consols, and Great Wheal Alfred—as "not to be lost sight of by the speculator." Since, the latter shares have risen 25 per cent., and more enquiry exists for both the others. A case of the uncertainty of mining property has occurred this week in East Wheal Russell. The writer was about to institute a comparison between this "cailing" mine and Wheal Trevelyan, paying 20 per cent. per annum in dividends; the latter in 1024 shares, being worth on the market 29,000*l.*; and the former in 4000 shares, 32,000*l.*, its real value depending on the cutting of the lodes rich in the 88 in. level, it having gone down from the 62 in. level; but the result has been the getting through the lode in the 88 in. level, and finding it to contain, with some exceptions, not less than 7*l.* The statistics of this mine, published by an official party, states that, "Should the lode continue to improve to the 68 in. level, the mine will soon be brought into that profitable state which has long been predicted by some it would arrive at." The reverse

having unfortunately, however, been reported to have happened, instead of dividends more "calls," perhaps, may be feared. Lady Bertha continues the vicissitudes of rising and falling in value daily; it presents no sort of stability in prices. South Lady Bertha is steadily progressing towards, apparently, a good mine, and shares stand in value at a lower price than the present (7*l.* 6*d.* per share) a large business would be transacted, and its prospects as a mine considered, they appear worth much more. Wheal Kitty (St. Agnes), tin, in 3000 shares, has been long in work, and the shares lately have been depressed in value, in consequence of the low price of that metal. The advance, however, which has taken place of 7*l.* 10s. per ton is important for this mine, selling 12 or 15 tons a month, and the shares are, consequently, coming again into notice—buyers at 3½ to 3½, although an hypothetical lot were lately sold to fortunate purchasers under 3*l.* At the next meeting but one a dividend, it is said, is anticipated. It is very agreeable to the writer also to announce another improvement in Old Tolgus United—in the 22 fm. level west, 5 tons of copper ore per fm.; the other points also progressing with increased success, and the shares in demand.

The writer, strongly impressed with the importance of the matter, as affecting the interests of investors, has not seldom called attention, as a relative question, to the number of shares in which a given mine may be constituted, and adduces now an instance in New Treleigh being in 8000 shares, which, at a price of 12s. or 15s., gives 6000*l.* for a mine on its introduction, and, consequently, before much work can be done. It is not intended to discuss the question of the real value (a difficult point to get at in any mining property) of this mine, but to state that this large number of shares has, to the writer's regret, prevented business in them more than one instance. However, it is much to the credit of the management to have resolved to reduce the number to 6000 (4000 would have been better); and to present holders this step gives a bonus of 25 per cent. The writer cannot too strongly urge this question upon the attention of intending investors, in any mine; the old Cornish practice being a few shares, down to 200 or 250, which is either a sound principle, or 20,000, or any proximate number, is an unsound one, the effect of which is to encourage speculative instead of bona fide operations in concerns so overburdened with shares, and consequently adventurers.

FOREIGN MINES.

St. John del Rey Mining Company.—Advices from Brazil:—
Morro Velho, Oct. 18.—The produce for Sept. is 22,683 o*l.*, and is thus derived:—
O*l.* Tons stone. O*l.* per ton.
From general stamps 19,782 from 6547.2 = 3.021 3.027
" Susanna (champion ground) 542 166.4 = 3.257
" Arrastres 1,305 = 0.179
" Fraia 1,154 =
Total 22,683

This produce of 22,683 o*l.* is better than the return for September, 1857—19,376 o*l.*, and is above the average yield of the stone stamped during the year, which was 2,978 o*l.* per ton. The present percentage of loss in reduction, 43.16, is rather more favourable than that for August, 47.00 per cent., and is the best yield from the stone since Feb. The quantity of stone stamped for the month is the smallest during the year, owing to the scarcity of labour usually felt in September, when a considerable number of labourers are engaged in planting their grounds.

The produce for Sept., 22,683 o*l.* (less duty, 2 per cent., 454 o*l.*) = 22,229 o*l.* at 7s. 8*d.* per o*l.* = £8521 2 4
The cost for Sept., rs. 77,309.431, exchange 2s. 2*d.* = 8375 3 9
Profit £145 18 7

FORTUNA MINING COMPANY.—Nov. 30:—Canada Inco Mine, West of the Engine Shaft: The 6th level, east of Adilla's shaft, is worth ½ ton per fm. The lode in the 5th level, east of La Gloria mine, is very regular, and spotted with ore throughout, but not of commercial value. The 5th level, west of Buen Provecho mine, is worth ½ ton per fm.; this lode is disordered by a head coming in from the south. The ground in the cross-cut south, in the 3d level, west of cross-course, is favourable, and we expect to cut the lode shortly.—East of Taylor's Engine Shaft: The 4th level, east of Garcia's mine, is worth ½ ton per fm. The 3d level, east of Tomas's mine, is worth ½ ton per fm.; lode split up in branches, and letting out much water, and we hope it will drain lowlands shaft shortly. Clavel mine is worth 2 tons per fm.; there is more lode coming into the south. The lode in O'Shea's mine is very small and poor, and ground very hard.—Los Salidos Mine: The lode in the 3d level, west of Alvin's mine, is very small, producing stones of ore, but not to value at present. The 2d level, east of Martinez mine, is worth ½ ton per fm.; ground rather hard, and lode small. The lode in the 2d level, east of Barrineau's mine, is rather small, producing strings of ore, but not of commercial value. Morris's engine-shaft is worth ¾ ton per fm. The lode in the 65, east of Luis mine, is large and regular, but unproductive at present. The 65, east of Batista's mine, is worth 2 tons per fm. The 65, east of Taylor's shaft, is communicated with the same level west of Batista's mine. The 65 fm. level, west of Taylor's shaft, is worth ½ ton per fm.; lode compact and well defined. The 55 fm. level, east of Batista's cross-cut is worth ½ ton per fm. The 55 fathom level, west of Gomez mine, is worth ½ ton per fm., and the 55 fathom level, west of ditto, is worth 2 tons per fm.; this lode is composed principally of carbonate of lime and lead ore. The 55, east of Rasto's mine, is worth ½ ton per fm. The lode in this level has formed a junction with the north part; we shall strip down the piece of the lode that remains standing between the present point of junction. The 45, east of Antonio's cross-cut, is commenced this month; the lode is 5 ft. wide, and orry throughout.—Field's Lode: The lode in the 45, east of Enrique's mine, is of a promising character. The 20, east of Field's, is worth ¾ ton per fm.; lodes small but well defined.—Shafts: Shaw's shaft is worth ½ ton per fm. This shaft is suspended for the present on account of the water, but will be recommenced on the 85 being extended further. Taylor's shaft is worth 1 ton of ore per fm. Field's shaft is worth 1 ton per fm.; lode very regular and compact. Warner's shaft is worth 5 tons per fm. The Englishmen are still engaged in stripping down the lode in the 85. Shaw's shaft is worth 1 ton per fm.; lode small, but very regular and compact. Warner's shaft is worth 5 tons per fm.; lode small, but very regular and compact. Carrasco's mine is worth ½ ton per fm.; the lode is divided into two parts, the south being the productive one. Enrique's mine is communicated. A new mine, called Jean mine, has been commenced east of Enrique's, it is worth 1 ton per fm. The lode in the cross-cut south at the 45 is worth, at the point intersected, 1 ton per fm.—General Remarks: The weather has been very unfavourable both in the mine and on the surface. During the past month the water has been high, and weighed to the smelting works 335.30 tons. The ore which we shall break for December we estimate at 350 tons. If, however, we are fortunate, and obtain the shaft of the eastern hauling engine at an early date from Seville, a much larger quantity than 350 tons will be dressed.

LUSITANIAN.—Thos. Chegwinn, Nov. 27:—Pahal Mine, on Basto's Lode: The ground at Taylor's engine-shaft, sinking below the 38, is without attention to notice, but the water has much increased, and still continues to increase every inch we sink. The ground in the 38 cross-cut, driving south of Taylor's engine-shaft, continues of a hard nature. The lode in the 38, driving west of Taylor's engine-shaft, is 3 ft. wide, worth 1½ ton per fathom. The lode in the 38, driving east of the same shaft, is 3½ ft. wide, worth 2½ tons per fathom. The lode in the rise above the 28, west of Taylor's engine-shaft, is 2 ft. wide, worth 3 tons per fathom. The lode in Ferreira's mine, sinking below the 28, is 2½ ft. wide, worth 1½ ton per fathom. The lode at River shaft is 1 foot wide, composed of quartz and a little flocon. The lode in the 28, driving east of River shaft, is 3 ft. wide, composed of quartz and a branch of low quality ore worth 1 ton per fathom. The lode in the 8, driving east of the same shaft, is 6 ft. wide, composed of quartz and stones of copper ore. The lode in the add level, driving east of Pinto's shaft, is 1 ft. wide, composed of soft quartz and flocon, spotted with lead. The lode in the add, driving west of the slide lode, is 2 ft. wide, composed of white print, a little flocon—runners of the country—and good stones of a good quality ore, and looks very promising for improvement. The lode in the add level, driving west of the Corza, is very small, having in it a little quartz and kilaas; a very regular underlie. There has been nothing done in the bottom of Corza's shaft since our last visit. The new shaft, called Corza, is commencing this month; they will begin to sink again next week. The lode in Alvaro's mine, sinking below the old bottom, east of Pinto's shaft, is 2 ft. wide, composed of white print, kilaas, and spots of lead. The lode in the slope No. 1, in back of the 18, west of Butler's mine, is 8 in. wide, worth ¾ ton per fathom. The lode in the slope No. 2, in back of the 28, east of Fontoura's mine, is 1 ft. wide, with a branch of ore 3 in. wide in it, worth ½ ton per fathom; the ore ground in this slope will all be taken away next week. The lode in the slope No. 3, in back of the 28, west of Fontoura's mine, is 1½ ft. wide, worth 1½ ton per fathom. The slope No. 4, in back of the 28, west of Oliveira's mine, is suspended, it being poor, and the men removed to work on the Mill lode. The little ore in the slope No. 5 is now taken away, and the men will go to drive the 20 cross-cut south of Oak shaft, and the old shaftmen return to sink the shaft.—Mill Lode: The lode in the 18, driving east of the cross-cut, is 6 in. wide, composed of flocon and good stones of ore. The lode in the same level, driving west of the cross-cut, is 9 in. wide, worth ¾ ton per fathom. The lode in the slope in back of the 18, west of the cross-cut, is 1 ft. wide, worth 1½ ton per fathom of lead and copper ore mixed. At Oak shaft, the ground in the 20, driving south of Oak shaft, is very hard.—Carvalho: The lode in the new add level, driving south-east on the lead lode, is 2½ ft. wide, composed of quartz and good stones of lead, worth ½ ton per fathom. The lode in the add level, driving west on Alvaro's lode, is 4 ft. wide, of just the same quality as for some time past.

THE EAST INDIA COAL COMPANY.—C. Staig, Nov. 15:—Goopenathpore: At this place 8928 maunds of coal have been raised. Owing to the Doorgah Poojah, which commenced on the 12th inst., we have had only 11 working days.—Topost: The water has been effectively cleared from the mine, and we have commenced raising coal. Great quantities of carb and rubbish from old workings were found in this mine, which I am having taken out. About 5490 maunds of coal have been raised during the past 11 working days.—Konostoria: No work in progress here. The raising of coal has been stopped for the present.—Bassarrh: Since coming upon coal the water in the shaft has increased very much, and we have been unable to dry the shaft with the gin. I have commenced the sinking of a second shaft here, and have gone down to the depth of 12 ft. Immediately the Gwynne's pump arrives here we shall put it down.—Kosta: We have quarried about 3500 maunds of coal during this fortnight. The jungle around the quarry is being rapidly cleared, and huts for coolies being built.—Enash: No work in progress here.—Tunkooler: No work in progress here.—No work in the add contract has commenced taking out the water by means of Tarah; this will take him about a month to do, after which he will commence quarrying the coal.—General Remarks: At all our collieries about 19,507 maunds of coal have been raised during the past fortnight.—The Doorgah Poojah holidays, which commenced on the 12th inst., interrupted and stopped our work, or else double the quantity of coal would have been raised. After the Poojah we shall be able at least to double our present quantity.

MANUFACTURE OF COPPER.—No. II.

The first patent for "improvements in the art of smelting copper ore" granted in the present century was to Mr. John Lewis, of Llanelly, but what the process which he desired to secure by this patent was we have no means of knowing, as no specification was enrolled. It is probable, however, it was not dissimilar from the invention in respect of which a patent was completed during the following year. On July 23, 1813, six months after the grant of the last patent, we find another secured to Mr. John Lewis, late of Llanelly, but now of Penclawdd. This invention consists in building the ore and metal furnaces between two calciners, and lifting the same above the said furnaces. He causes the ore and metal when calcined to be conveyed red-hot through iron pipes direct to the furnace. He lengthens the run of the metal from the furnace to the metal pits. He annexes a diagram to his specification, showing the ground plan and section of the said calciners and furnaces; but the description above given affords a good idea of the nature of the improvement. By the aid of his invention, he says, the same work may be done in less time, and with fewer furnaces; that there is no waste of ore or metal from removal; that there is no explosion from the metal pit to injure the building; and that there is a considerable saving of fuel, labour, and materials.

In September, 1814, Mr. W. E. Sheffield, of the Polygon, Somerset, patented an invention, which consists in subjecting copper (chiefly when in combination with other metals) to the process of cementation by heat in a closed vessel, or furnace, with charcoal, charred coal, or animal coal, wood charcoal being preferred. With regard to the preparation of the copper to be treated, and to the management and application of heat, he employed the then well-known processes. The heat employed was somewhat higher than that necessary for annealing copper; and sometimes he carries the heat as high as that of fusion. The second part of the invention relates to working the copper, or its compounds, into wire, when such metal is capable of being wire-drawn. A patent for "improvements in smelting the ores of various metals" was granted to Mr. R. Smith, of Tibbington House, Stafford, but no specification was enrolled; and, from the address of the inventor, it is probable that the invention referred rather to iron than to copper. An invention, which consists in connecting a furnace, in which the ore or metal is calcined, to a furnace in which the same is melted down, making use of one grate or fire-place only to effectually heat and do the work of two furnaces, was patented by Messrs. Wm. and Martin Bevan, of Morriston. Their improvement is effected by first passing the heat from the grate into the furnace requiring the melting, or strongest heat, and after it has performed its work in this furnace they convey it into the calcining furnace. They likewise build two other similar furnaces, and employ one stack for the four furnaces.

A period of seven years elapses before we meet with any other copper smelting patent, and we here find, on Dec. 22, 1822, a patent granted to Mr. W. Pass, of Curtain-road, Shoreditch. The inventor claims the application of a hopper for supplying coal or fuel to a furnace for smelting ores, but disclaims the use of such hopper for other purposes. On May 16, 1825, Mr. John Badams, of Ashted, near Birmingham, patented a "new method of extracting certain metals from their ores, and purifying certain metals." No specification was enrolled, but upon the same grounds as we supposed Mr. R. Smith's patent to relate chiefly to iron, we should give a similar opinion in this instance. The next patent is that of Mr. Jos. Jones, of Amlwch, granted July 17, 1828. This invention relates to the use of a reverberatory furnace, in which the regulus is molten with copper ore. After the charge has been melted, and well stirred, it is left in the furnace for a quarter of an hour, and when run out is found to be of a better quality than usual.

EUROPE AND AMERICA.—INTERCOMMUNICATION.

The necessity and importance of increased facilities being afforded for rapid communication between Great Britain and her colonies is generally acknowledged, and at the present moment Canada is the object of much attention, not only from the vast progress which has within the last few years been made in that part of our possessions, but also from its being so valuable an aid to the carrying on of the commercial and social intercourse so rapidly increasing between Great Britain and the United States. Sailing vessels, for short voyages at least, may now be considered as things of the past, and, as concerns our trade with the United States, the chief question for consideration is how to establish and maintain a regular system of rapid communication between the most westerly point of the United Kingdom and the most easterly point of our possessions in British North America—the chief object being to enable us quickly to learn the requirements of the American markets, and at the same time give the Canadians every possible opportunity of participating in our gains.

Under the title of "The Social, Political, and Commercial Advantage of Direct Steam Communication and Rapid Postal Intercommunication between Europe and America, via Galway," Mr. Pliny Miles has issued (through Messrs. Trübner and Co., of Paternoster-row) a collection of interesting facts, which prove, in the most indisputable manner, not only the importance of encouraging steam communication between Great Britain and the colonies, but also the deplorable effects of its discouragement. While England, by her undeviating perseverance in securing liberty to her people, and facilitating by liberal measures the development of her commerce, has been making satisfactory progress, our continental neighbour, France, appears, under the guidance of an unscrupulous despot, to be gradually declining in commercial prosperity, and will doubtless continue to do so until she has the advantage of being governed in a more constitutional manner, and by more conscientious men, and has the power to become possessed of institutions sufficiently free to lead to the introduction of a more liberal policy in the administration of her affairs. The French coasting trade has decreased since 1847 to the extent of 194,592 tons. The single place which exhibits an increase of tonnage in the coasting trade is Havre, the only port in France that has an extensive steam commerce, and that commerce almost entirely in foreign vessels; whilst in Great Britain, of the vessels exclusively in the coasting trade the tonnage of sailing vessels increased during the last four years for which returns have been issued from 694,712 to 767,925, and steamers from 54,092 to 92,481 tons. A return just published in France, although showing in the aggregate an increase of revenue in the first nine months of the present year as compared with the corresponding periods of 1856 and 1857, there was a considerable decrease in several sources of revenue, which have a very direct bearing on the prosperity of commerce. And it must not be forgotten that whatever has a prejudicial influence upon general commerce prevents the successful development of the mineral resources of a country, and this will account for the fact that whilst in England moderately productive mines return enormous profits, in France it is extremely difficult to obtain only a fair remuneration from mines known to be marvellously rich, and situate in what would appear to be the most desirable localities.

But to return to the advantages derivable from the Galway line of steam packets, it is evidently necessary to show, in the first place, that there is ample employment for the shipping at present about, and this is sufficiently proved by the fact that in 1842 the products of the United Kingdom, amounted to 47,000,000, in 1847, to 53,000,000; in 1852, to 78,000,000; and in 1857, to 122,000,000, and that there is still ample freight for all available vessels. And as to the home-trade, it need only be remarked that in exchange for this foreign sale of British mines, forges, looms, and workshops, we pay 25,000,000, for breadstuffs every year; a similar sum for sugar, tea, wine, spirits, and tobacco; and more than 50,000,000, for wool, cotton, raw silks, flax, and timber. Twenty years since, says Mr. Miles, prudent people imagined that none but the reckless and rash, who were comparatively indifferent to danger, would ever attempt to cross the ocean except in sailing ships. Now the deaths and casualties from every cause, and the mortality from every description of accident and shipwreck, in proportion to the number of persons travelling, is far less on steam ships than on sailing vessels, and almost all steam lines find a larger amount of business than the projectors anticipated. To illustrate this case may be quoted, and that one relates to the traffic by steamers on the west coast of Ireland. A few years since Mr. John Orrell Lever put a small steamer on the route from Westport to Liverpool. The first steamer that left Westport had very little freight—a mere nothing; yet these vessels have established a traffic where none existed before, and opened the markets of England to the agriculturists of all the western and north-western counties of Ireland. There were never any steamers running regularly between Ireland and America before the "Lever line" was started in June last, yet the *Prince Albert*, on her last voyage from New York, returned last, and left 130 disappointed applicants, 90 of whom wanted a cabin passage, and nearly every departure from Galway has left passengers and freight behind, because the steamers were literally full.

Mr. Miles concludes his very instructive work by referring to the prospects of the Atlantic Royal Mail Steam Navigation Company, and its connection with the express companies of the American continent, and demonstrates that direct mismanagement and absolute neglect can alone prevent the company's operations being highly remunerative.

PATENT LAW REFORM.—On Thursday a preliminary public meeting of the National Patent Law Amendment Association was held at the Belvidere Tavern, Pentonville, Mr. Serjeant PARRY in the chair.—The CHAIRMAN opened the proceedings by remarking that he felt honoured in taking the chair at this meeting, seeing the subject was one of great national importance as regards its bearing upon the improvement of our manufactures; the maintenance of our industrial pre-eminence being, as they all knew, of the very first importance to this country. He also felt great gratification in doing anything to aid the man of genius, whether author or inventor. The cause of the former having heretofore had his consideration and co-operation at the time of obtaining the Copyright Act; and that of the latter he was now desirous to forward. He then called on Mr. T. D. Mahon, Member of the Council of the Association, to move the first resolution:—"That heavy taxes on inventors in respect to the property in their inventions, inasmuch as such taxes tend to prevent the publication and development of their projects for improving our manufactures, are injurious to the best interests of the country."—Mr. MAHON, having very lucidly expatiated on the evils of burdening British inventors, when the country required the aid of their inventions to keep up the character and standing of our manufactures, and having stated that the National Patent Law Amendment Association, which was formed in the year 1850 by himself and Mr. CAMPLING, the well-known patent agent, had been partially successful in obtaining patent law reform, now desired to ease the inventor of all oppressive burdens and objectionable enactments, moved this first resolution, which was seconded by Mr. YEATES, and supported by Mr. BROWN, and carried unanimously.—After this, Mr. FULLER, sen., was called upon to move the second resolution:—"That, although inventors are willing to pay all the reasonable charges of obtaining letters patent, they confidently appeal, and this meeting affirms their appeal,

against the present rate of stamp duties, as altogether beyond what is necessary for the purpose; and this meeting hereby authorizes the Council of the National Patent Law Amendment Association to apply to the Government for the reduction of these stamp duties, and for other reforms in the Patent Law."—Mr. FULLER, in moving this resolution, showed that the receipts of the Government Patent Office were so large that there was a considerable surplus; and this clearly evidenced that more taxes, or stamp duties, were levied than the maintenance of the Patent Office required.—Mr. CAMPLING, in seconding the resolution, observed that, as he considered inventors as much, and perhaps, in strict justice, even more entitled to property rights than the possessor of land or money, it was unjust, as well as impolitic, to saddle them with heavy and unnecessary taxes; and although it might be said that the object of the present payments was to aid parties to surrender useless and frivolous patents, still such high amounts as 25l., 50l., and 100l., were a great deal more than was necessary.—Mr. BROOKES, in supporting the resolution, advocated a system of taxing the sale of patent articles. The resolution was then put and carried; and after a vote of thanks to the Chairman, the meeting separated.

SURREY GARDENS COMPANY.—The property so long known as one of the most favourite places of amusement on the Surrey side of the Thames—the Royal Surrey Gardens—is about to pass into the hands of a new company, for a sum of 15,000l. The capabilities of the property are universally admitted, and although the undertaking has not hitherto answered the expectations of an experimental company, it is the confident belief of the directors that at the present low price, by avoiding as far as possible the assumption of professional management, and by returning upon the capital expended may be expected. The estimate of receipts and expenditure is set forth in the clearest manner, and from it there appears no doubt that a net profit of 4500l. per annum might easily be realised by simply letting the several portions of the property, and almost without risk.

STEAM TELEGRAPH COMPANY.—Under this title a company, with a capital of 100,000l., in shares of 10l. each, is in progress of formation. The object of the company is to work a patent granted to Mr. Isambard Bragg for improvements in apparatus for lighting, signalling, and telegraphing by means of electricity. It is stated that the most important of the inventions consists in the application of steam-power to electric telegraphy, by which means not only short messages but lengthened reports may be conveyed with increased precision and rapidity to any distance along a single line of wire. A despatch composed of 2000 words may be sent in the same space of time as is now occupied in the transmission of messages of not more than 20 words.

RAILWAY TRAFFIC.—The Traffic Returns of Railways in the United Kingdom for the week ending Dec. 4 amounted to 422,050l., and for the corresponding week of 1857 to 398,200l., showing an increase of 23,790l. The gross receipts of the eight railways having their termini in the metropolis amounted for the week ending as above to 169,260l., and for corresponding week of 1857 to 162,450l., showing an increase of 6827l. The increase on the Eastern Counties amounted to 1290l.; on the Great Northern to 1175l.; on the Great Western to 449l.; on the London and North-Western to 3260l.; on the London, Brighton, and South Coast to 247l.; on the London and South-Western to 198l.; and on the South-Eastern to 273l.; together, 6907l. But from this must be deducted 80l. the decrease on the London and Blackwall; leaving the increase as above, 6827l.

The receipts on the other lines in the United Kingdom amounted to 252,764l., and for the corresponding week of last year to 235,501l., showing an increase of 16,963l. In the receipts of these lines, which added to the increase on the metropolitan lines, leaves the total increase 23,790l., as compared with the corresponding week of 1857.

WEEKLY LIST OF NEW PATENTS.

GRANTS OF PROVISIONAL PROTECTION FOR SIX MONTHS.—J. G. MARTIN, Amptill-square, London: Improvements in the manufacture of iron, and in the apparatus employed in such manufacture.—W. HANCOCK, Upper Chadwell-street, Middlesex: Manufacture of telegraph wires and cables.—E. A. POSTER, Shoe-lane, London: External surface condensers.—W. CLARK, Chancery-lane, London: Purifying natural gas.—J. A. COMMUNICATOR, from E. C. MARTIN, Paris.—J. E. F. LARSEN, Marke, Hanover, and Chipping Norton, Oxford: Motive power engines.—D. BOWEN, S. ROBERTSON, Greenock: Improvement in steam-engines.—C. TOMLINSON, Worcester-street, Wolverhampton: Stop taps or valves.—H. GARDINER, New York, U.S.: Compound axle hub and wheel for railroad cars.—E. NELSON, New York, and Ramsey, Isle of Man: Apparatus for raising and lifting water and other liquids.—S. W. JOHNSON, J. VAHLEY, Peterborough: Pressure and vacuum gauges.—W. H. DAVES, West Bromwich: Improvement in force hammers, and in the anvils used with force hammers and squeezer.—W. GOSNELL, Glasgow, North Britain: Improvements in furnaces, and in the combustion of fuel, and in apparatus connected therewith.—A. V. NEWTON, Chancery-lane, London: Retorts for generating illuminating gas.—R. H. HESS, Islington: A new manufacture of articles, parts of articles, parts of machinery, surfaces, and ornamental works from talc and other silicates of magnesia.—J. S. NIBBS, Aston: Lighting, heating, and ventilating.—J. H. JOHNSON, Lincoln's Inn-fields, London, and Buchanan-street, Glasgow: Employment of electricity as a motive power.—C. G. CALVERT, C. LOWE, Manchester: Improvement in the manufacture of silk.—H. EASTWOOD, Eiland, near Halifax: Purifying gas for illuminating purposes.—R. BODMER, Thavies Inn, Holborn, London: Valves for regulating the supply of steam.—C. MARTIN, Salford: An improved steam trap or apparatus for allowing the escape of water and air from pipes, vessels, or chambers heated by steam.—E. DIXON, J. FISHER, Wolverhampton: Improvement in the manufacture of welded iron tubes.—P. GRIFFITHS, J. BRENNAN, Barnley: Lubricators for introducing lubricating matter into steam cylinders, and other chambers or parts under pressure.—J. TAYLOR, Birmingham: Hydraulic presses.—C. BURRELL, Thetford: Traction engines and carriages.—H. GERBER, Glatway-road, Bayswater: Improvements in the mode of, and apparatus for, manufacturing gas for illumination and heating.—W. E. NEWTON, Chancery-lane, London: Improved expansion, or cut-off gear for steam-engines.—J. H. JOHNSON, Glasgow, and Buchanan-street, Glasgow: Locomotive engines.—D. EVANS, Stratford, G. JONES, Kemington-lane: Pumps and water gauges.—J. LUIS, Welbeck-street, Cavendish-square, London: A new railroad, with continued supports splintered together without any wood being used. (A communication from L. BARROUX).—J. THOM, T. M. HALL, Preston: Preventing the fusion of the fire-bars in locomotive or other furnaces.—G. BOCCIES, Totnes: Construction of furnaces.—J. LOACH, JOHN COX, Birmingham: Certain improvements in ornamenting the surfaces of japanned goods, and which said improvements are also applicable to the ornamenting of certain other surfaces.—T. P. FRASER, Glasgow: Pressure-gauge for steam, gas, or other fluids.—H. BESSEMER, Queen-street-place, New Cannon-street, London: Railway and other wheels and wheel tyres.—L. BISSEL, New York, U.S.: Trucks for locomotive engines.—E. L. BENSON, Sheffield: Manufacture of useful alloys of aluminium.

STEEL-TEMPERING FURNACE.—Mr. J. Thomas, New York, has patented an improved furnace for tempering steel springs. He passes the steel wire or strip of sheet steel which is intended to be tempered through an opening in a plate of fire-clay or cast-iron, which is exposed to a well-regulated fire on both sides in an upright furnace. This furnace is placed over a small tank containing water or oil, or any other hardening liquid, this tank being placed in such relation to an additional fire that heats up plates of cast-iron, that the steel spring may be passed from the tank between, and be brought to the proper temper without coming in immediate contact with the fires.

MANUFACTURE OF NITRATE OF POTASS.—According to an invention just patented by Mr. John Fraser, of Gallowgate, Glasgow, he proceeds as follows:—Take one ton of muriate of potash, of not less than 90 per cent., and of ordinary commercial nitric acid 22½ cwt. Dissolve the muriate of potash in as much water as may be necessary therefor, and allow it to subside. Place this liquor in suitable vessels (earthenware will do) and add the nitric acid. Now apply heat and collect the muriatic acid gas, condensing the same into acid in the usual way. Place the residue in vessels to crystallise, and the crystals obtained to be nearly pure nitrate of potash, indeed, commercially speaking, they may be called pure. They also produce a nitrate of potash as pure as his own from the ordinary nitrate of potash produced in the East Indies, or elsewhere, by dissolving it in water, and adding nitric acid, according to the refraction, boiling and crystallising in the usual way—say, for instance, at 3½ per cent. refraction about 3½ lbs. of nitric acid to the hundredweight.

MACHINE FOR FORGING IRON.—An invention, the object of which is to supersede the use of sledge-hammers in heavy forgings, has been provisionally specified by Mr. T. Dobson, of Birmingham. The apparatus consists of two upright frames, between which the hammer helve vibrates, being fixed on a centre or shaft in the rear of the frames. Two horizontal rods are formed in the frames, to allow of slide blocks working in them, for the purpose of carrying the ends of transverse shaft, on which is fixed a pulley, fly-wheel, and double cam for raising the hammer. This shaft is moved laterally or forwards in a horizontal direction by means of a screw or lever, and quadrants fixed to the back plate of the machine, and connected to the slide blocks by suitable links, in order to bring the cam shaft nearer to or further from the fulcrum so as to regulate the fall of the hammer, and, consequently, the force of the blow. A screw arrangement similar to the above is likewise used to ensure the hammer falling on the part of the anvil intended.

IMPROVED STEAM-BOILERS.—Mr. John Clare, jun., of Liverpool, has just patented an improvement in the construction of boilers for marine, locomotive, and stationary use. If weight, space, and increased strength of structure be a desideratum, Mr. Clare's invention is undoubtedly meritorious, as he positively asserts that he can construct a boiler upon his principle that will stand upwards of 1000 lbs. pressure to the square inch. We learn that locomotive engineers of great repute have reported favourably upon Mr. Clare's discovery, and that he has taken orders from one of the largest cotton-spinners in Lancashire for ten boilers of large dimensions that will stand 500 lbs. to the inch, and the manufacture of them has been entrusted to one of the first boiler makers in Manchester. It is anticipated that the invention will meet with general approbation.

BISULPHATE OF CARBON AS A MOTIVE POWER.—Heretofore when using bisulphate of carbon as a motive power, the vapour thereof has been combined with steam, and the two have been heated to work ordinary engines, and the bisulphate of carbon has then been separated from the water after condensation. Mr. J. York, of Paris, proposes to employ the vapour of bisulphate of carbon without mixing it with steam, and to condense the vapour, again and again using the bisulphate of carbon. The arrangement of the boiler and machinery may be greatly varied, but he prefers that the generator of vapour should be within an ordinary steam-boiler, and consist of a vessel having through it a number of tubes within which the steam passes. The bisulphate of carbon is pumped or forced into the vessel or generator in a quantity sufficient to produce a stroke of the engine connected therewith, and the vapour, after passing from the engine is condensed by a surface condenser, as heretofore used, which is worked by an air-pump, and the condensed bisulphate of carbon is again and again used, by being forced into the generator or heated vessel.

DYEING AGENTS.—A patent recently taken by Mr. Henry, patent agent, Fleet-street, for Vaseur and Houbigant), specifies, as dyeing and preparing agents, concentrated tannic acids of plants or vegetable nature containing tannin, resinous bodies, and bitter or styptic principles, treated with acids or chlorine. Pulp for paper and paste-board, and ingredients for the manufacture of blacking, are obtained from the residue. Tanned skins and hides are obtained quite colourless, by combining acids or chlorine with the tanning agents.

GLYCERINE.—We learn from a patent recently taken in this country, by Mr. Henry (on behalf of Vaseur and Houbigant), that among the useful purposes to which glycerine can be rendered available it may be advantageously applied to mortar, cement, paste, and similar matters intended for daily use, in order to keep them in a suitably damp state.

IMBS'S SEWING MACHINE AND FABRIC.—A patent has been lately taken by Mr. Henry (on behalf of Mr. Imbs), for a fabric composed of layers of silvers, stitched together by threads, interlacing like warp and weft, and afterwards filled. The machine preferred for the stitching delivers the fabric through independent guides as the work proceeds, the warp needles being connected together into a comb or reel, moving suitably to traverse the fabric, and forming loops, into which the weft needle inserts its thread.

THE FRENCH IRON TRADE.—Accounts from St. Didier announce an improvement in the price of iron. Several furnaces which had been blown out are again at work. It appears from official returns that 957,955 kils. of wrought-iron, and 703,909 kils. of cast-iron, suitable for building purposes, entered the gates of Paris during September. These figures show a diminution of 29,161 kils. in the wrought-iron, and an increase of 13,701 kils. in the cast-iron, imported into Paris during September, as compared with the corresponding month of 1857.

RUSSIAN METAL TRADE.—Of late the exports of iron have sensibly diminished. In 1849-50 the exports were 742,349 poods, of which England took 26 per cent. The diminution is attributable to the distance of the principal Russian mines, which has contributed to keep up the price of iron in that country, while that of foreign iron has greatly decreased. The exports of copper show great fluctuations, but rose (1849-53) to 214,512 poods, of which England took 26 per cent. The annexed table shows the importations of metals into Russia:—

Years. Poods.

Lead..... 1847-51..... 350,312

Tin..... 1851-55..... 31,740

Steel..... 1851-53..... 41,700

England figures first among the countries from which these imports are derived, and she also furnishes almost the whole of the importation of pig-iron, which has greatly increased, and averaged in value (1851-53) 1,250,000 silver roubles. The hour of freedom for the mining operations of Russia is now no longer "looming in the future," for their emancipation from an ignominious serfdom is to take place within six months. The Emperor has appointed three commissions, under the direction of the Minister of Finance, to carry this progressive order into effect—one commission for the Government of Moscow, one for the circumscription of Oranburg, and one for the Oural. These miners,—in fact all engaged in mining operations, it must be borne in mind to form an adequate idea of the importance of this step—were once free. Anxious to give an impetus to the metallurgical industry of the Empire, Peter the Great, to all who would devote themselves to that branch of industry, conceded villager and serf. The nobles, in the course of time, encroached upon these rights, till at length the peasants became serfs. But freedom has now arrived for their descendants.

Contract for Coals—Consulate General of France.

NOTICE IS HEREBY GIVEN, that SEALED TENDERS for a CONTRACT for the SUPPLY of TWO MILLION FIVE HUNDRED THOUSAND KILOGRAMMES of NEWCASTLE COALS, and ONE MILLION FIVE HUNDRED THOUSAND KILOGRAMMES of CARDIFF COALS will be publicly received on the 27th December inst., at Cherbourg (France). The schedule of particulars may be seen at the Consulate General of France, 36, King William-street, between Twelve and Four o'clock.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

In the Cause of PAINTER v. ALLERTON AND OTHERS. IN RE NORTH WHEAL BUSY MINE.

NOTICE IS HEREBY GIVEN, that pursuant to a DECREE made in the abovementioned Cause, and bearing date the 14th day of August last, as amended by an Order made in the same Cause, and dated the 8th day of November last, a PUBLIC AUCTION will be HELD at the Registrar's Office, Truro, on WEDNESDAY, the 22d day of December inst., for SELLING 25 (25th) SHARES of the defendant John Allerton, and 3 (3th) SHARES of the defendant Arthur Whipham, respectively of and in the said MINE.

For further information, application may be made to Messrs. BOSCOLLA and DAVIS, plaintiffs' solicitors, Penzance; or to Mr. STOKES, Solicitor, Truro. Dated Registrar's Office, Truro, December 9, 1858.

FIVE PER CENT. DEBENTURES.—RECIFE AND SAO FRANCISCO PERNAMBUCO RAILWAY COMPANY (LIMITED).

THE DIRECTORS of this company are PREPARED to RECEIVE TENDERS for LOANS to a limited amount on DEBENTURE BONDS, in sums of £100 and upwards, for periods of not less than three nor more than seven years, at 5 per cent. per annum. The interest, which will be the first charge on the entire revenue of the company, will be paid half-yearly, at Messrs. Heywood, Kennards, and Co's., Lombard-street, London, on presentation of the coupons.

Proposals to be addressed to the secretary, at the offices of the company, Gresham-house, Old Broad-street, London, E.C.

By order, W. H. BELLAMY, Sec.

MADRAS RAILWAY COMPANY—THIRD EXTENSION

SHARES (FIVE POUNDS PER SHARE PAID).—NOTICE IS HEREBY GIVEN, that, in pursuance of a resolution of the Board of Directors, the PROPRIETORS of THIRD EXTENSION SHARES (25 per share paid) in the Madras Railway Company are REQUESTED to PAY a CALL of FIVE POUNDS PER SHARE on each of their respective shares, on or before the 28th day of December inst., at the Union Bank of London, 2, Princes-street, in the City of London.

Notice is hereby further given, that interest at the rate of 4½ per cent. per annum will be charged upon all calls remaining unpaid after the day above mentioned; that the proprietors whose calls are not paid on or before the day named will further incur a loss of interest on the amount called upon each share for the period intervening between the 28th day of December aforesaid and the date at which the company are entitled, under the contract, to make the next payment into the Treasury at the East India House on account of the capital, and that if default be made in the payment of this call, the shares in respect of which default is made will become liable to forfeiture under the company's Deed of Settlement.

By order of the Board, JAMES WALKER, Managing Director.

33, New Broad-street, London, E.C., December 3, 1858.

C O L O N I A L B A N K.

Subscribed capital £2,000,000. Paid-up capital £500,000.

THE COURT OF DIRECTORS of the Colonial Bank HEREBY GIVE NOTICE, that, in pursuance of the provisions of the Charter, a HALF-YEARLY GENERAL MEETING of the proprietors will be HELD at the London Tavern, Bishopsgate-street Within, on WEDNESDAY, 5th January, 1859, at Twelve for One o'clock precisely, to receive the report of the proceedings of the Corporation, and for the election of five directors and one auditor, in the room of the following gentlemen, who go out by rotation, viz.:—

Thomas Naghten, Esq.

William Tetlow Hibbert, Esq.

Charles McGarel, Esq.

Thomas Masterman, Esq.

Sir Walter Minto Townsend Farquhar, Bart., M.P.

Eden Colvill, Esq., Auditor.

And who being eligible offer themselves for re-election. The transfer books of the corporation will be closed on the 22d inst., and re-opened on the 20th January, 1859.

By order of the Court of Directors, C. A. CALVERT, Sec.

13, Bishopsgate-street Within, December 13, 1858.

THE STEAM BOILER ASSURANCE COMPANY have much pleasure in ANNOUNCING that they have RECENTLY APPOINTED Mr. R. B. LONGBRIDGE as CHIEF ENGINEER of this company.

By order of the Committee, HANNAH AND COX, Secs.

Temporary Offices, 29, Corporation-street.

THE SOUTH EUROPE MINING COMPANY (LIMITED).

NOTICE IS HEREBY GIVEN, that the FIRST ORDINARY GENERAL MEETING of this company will be HELD at the offices, as above, on WEDNESDAY, the 15th of December inst., at half past Two precisely, to receive the report of the directors, and to elect an auditor on behalf of the shareholders.

By order of the Board, W. H. NOSS, Sec.

29, New Bridge-street, Blackfriars, E.C.

THE CWM EIGIA QUARRY SLATE AND SLAB COMPANY (LIMITED).

NOTICE IS HEREBY GIVEN, that the Liquidators appointed and acting under the voluntary winding-up of this company have discharged all the recognised debts and liabilities of the company, and that the SURPLUS ASSETS are now IN COURSE OF DISTRIBUTION among the shareholders. Any person having claim upon the company, or claiming to be admitted to share in the distribution of assets, is hereby required to bring in such claim on or before the 20th day of December inst., after which day the liquidators will hold themselves at liberty to distribute the assets, to the exclusion of all persons who shall not then have brought in their claims.

By order of the Liquidators, W. F. NOKES, Sec.

11, George-yard, Lombard-street, December 6, 1858.

THE CORNWALL GREAT CONSOLIDATED LEAD AND COPPER MINING COMPANY (LIMITED).

In 12,000 shares of £2 each.

OFFICES.—8, NEW BROAD STREET, CITY.

Shares in the above company to the extent of 10,000 have been taken up by the directors and amongst their friends and connections, without advertisement. The remaining 2000 shares are now offered to the public at par. The company was established last year, for the purpose of purchasing and working a group of mines—viz., the Latchley Consols, South Maria, Tamar Maria, and Tamar River sets—the four forming the western boundary of the Devon Great Consols Mine, the lodes of which are laid down by competent authorities as passing through this property. During the progress of the working at Latchley, the large influx of water in the old lode rendered the aid of a powerful steam-engine necessary: one of 150 horse power was purchased, erected, and it is in full work. At the above-named 60 ft. level two lodes of the copper ore are now being opened upon, which have been traced from the shallow levels, and found to increase in value as they descend. In the South Maria a good lode has been discovered at 40 fms., which will soon be reached at a greater depth.

The company are in possession of most satisfactory reports of surveys, &c., copies of which may be had, with prospectus and forms of application for shares, at the office of the company, or from THOMAS SMITH, Esq., sen., stock broker, 1, Copthall Chambers, Bank, and Stock Exchange.

SURREY GARDENS COMPANY (LIMITED).

Capital £20,000, in 20,000 shares of £1 each.

Deposit, 2s. 6d. per share.

The objects for which this company is formed are the purchase of the lease, fittings, fixtures, and appurtenances of the property known as the Royal Surrey Gardens, heretofore held and conducted by the Royal Surrey Gardens Company (Limited), in possession of the present proprietor, under a conditional agreement for sale from the official liquidator and mortgagees of the company.

Prospectuses, with names of directors and forms of applications for shares, can be obtained of ALBERT DIXON, Esq., No. 3, King's Bench-walk, Temple, E.C.; at the office, No. 19, Fenton-place, Walworth, S., adjoining the Gardens; or of Mr. BROOKES, No. 119, Cheapside, E.C.

SINGULAR COINCIDENCES.—ROYAL SANTIAGO, COLONIAL GOLD, AND NOUVEAU MONDE COMPANIES.

As the first-named company is now proposed to be wound-up, immediately it cut rich, it is instructive and amusing to revert to the other two companies, in both of which I was a shareholder. Immediately the manager, Mr. Clements, had sent indubitable evidence of the concern (Nouveau Monde) proving remunerative, another gentleman was sent out to discharge him and stop the work. In the second company, immediately reports came that quartz crushing was highly remunerative, a call was made and the company dissolved. Was Mr. Lemon Oliver one of the committee of consultation on the two latter, as he was upon the property of the Santiago Company?

A SANTIAGO SHAREHOLDER.

THE GREAT SHIP COMPANY (LIMITED).

FOR PURCHASING AND EQUIPPING THE "GREAT EASTERN."
Liability limited to the amount of subscription.
Capital, £250,000, in 250,000 shares of £1 each.
Deposit, 2s. 6d. per share on application for ten shares and upwards. Less than ten shares must be fully paid up on application.
Detailed prospectuses, full particulars, and forms of applications for shares, may be obtained at the offices of the company, as under.

JOHN HENRY YATES, Secretary.
Temporary office, 79, Lombard-street, London, E.C., November, 1858.

THE GREAT SHIP COMPANY (LIMITED).

The DIRECTORS of this company have MADE ARRANGEMENTS to GRANT FREE ADMISSION until Saturday, the 18th inst. (Sunday excepted), prior to closing the ship on commencing the necessary works for equipping her for sea. Admission by free tickets, which may be obtained at the stations of the South-Eastern, the Greenwich, the Blackwall, and the North London Railways; on board the Greenwich and Woolwich boats; and at the offices of the Great Ship Company.
79, Lombard-street, London, E.C. JOHN HENRY YATES, Sec.

PATENT DERRICK COMPANY (LIMITED).

OFFICES, 27, CORNHILL, LONDON.
Capital £100,000, in 2000 shares of £50 each.
This company's derricks, which may be employed either as stationary or moveable weight-raising apparatus, accomplish, expeditiously and economically, every description of hoist, whether on land or water, from 10 to 10,000 tons and upwards. The directors are prepared to construct, or license the construction, in any part of Europe, of Patent Floating, Transportable, or Stationary Derricks for Government Armies and Navy Yards, Harbour Commissioners, Dock Companies, Shipbuilders, Engineers, Contractors, and others.
A small floating derrick, built for the requirements of the Thames, and employed in lifting and transporting heavy weights, such as steam-engines, boilers, machinery, blocks of stone, &c., recently raised the brig *Lightning*, sunk in Erith Reach. A large floating derrick, specially designed and constructed for raising sunken vessels and for general salvage purposes, is fitting for operation about the coasts of Great Britain and off foreign shores.
A limited number of shares, of £50 each, in the capital stock of the Patent Derrick Company remain for allotment. These shares are required to be paid as follows:—£10 per share on application, and the remainder by calls of £10 each, at intervals of one month between each call.
Forms of application for shares, and prospectuses, may be obtained at the offices of the company, 27, Cornhill, London, E.C. G. J. SHARP, Sec.

THE GLOUCESTERSHIRE COAL MINING COMPANY (LIMITED).

Capital £40,000, in 40,000 shares of £1 each, with power to increase.
Deposit, 2s. 6d. per share.
To be incorporated and registered under the Joint-Stock Companies Acts, 1856 and 1857; and liability limited to amount of subscription.
CHAIRMAN—GEORGE CAVENTISH BENTINCK, Esq.
DIRECTORS—
GEORGE CAVENTISH BENTINCK, Esq., 48, Charles-st., Berkeley-square, London.
JOHN DUNNINGTON FLETCHER, Esq., 12, Westbourne-terrace, London.
FREDERICK B. PEARSON, Esq., Reims-ham, Reading.
JOHN W. WILLIAMSON, Esq., Gloucester Villas, Malda Hill, London.
(With power to add to their number.)
AUDITOR—
William Moates, Esq., accountant, 19, King's Arms-yard, Moorgate-street, London.
SOLICITOR—Walter Federick Nokes, Esq., 11, George-yard, London-street, London.
BANKERS—The City Bank, Threadneedle-street, London.
BROKERS—Messrs. P. W. Thomas, Sons, and Co., 50, Threadneedle-street, London.
CONSULTING ENGINEER—Joseph J. W. Watson, Esq., C. and M.E., F.G.S., &c.
SECRETARY (pro tem.)—Stephen James Green, Esq.
OFFICES OF THE COMPANY, 72, OLD BROAD STREET, LONDON.

PROSPECTUS.
Coal is a staple article of constant and increasing consumption, and the demand which exists for it may be said to be limited only by the quantity that the producer can offer, and the price at which it can be supplied. In the year 1857 upwards of 3,000,000 tons of coal were exported from Great Britain, while the home consumption at first sight appears fabulous, so immense was the quantity. It is obvious, however, that the wants of the country, as respects coal, may be regarded as constantly and rapidly augmenting; and it is not a matter of surprise, therefore, that a good colliery, well situated and well managed, has uniformly proved a lucrative investment. A reference to the statistics of the day will show that there is far less risk, and a greater certainty of large and profitable results, in working collieries than in any other mineral property.
This company is formed for the purpose of purchasing and working the coal in the four grants from the Crown, comprising about 350 acres, on which four well-known collieries, called the True Blue, Newham Bottom, Woodside, and Birchen Grove Collieries, are situated, immediately contiguous to the village of Eardun, in the Forest of Dean, in the county of Gloucester, in England; together with the railway, plant, steam-engines, tram-wagons, pit-cars, machinery, tools, and all other necessary appliances which, at great expense, have been lately placed on these important properties.

These four grants adjoin each other as shown in the plan furnished, and for all practical purposes, therefore, may be considered as forming one extensive but very compact estate; they contain about 2,000,000 tons of coal, which is of first-class bituminous character, and much valued for household purposes, for gas, iron-works, smelting, and especially for raising steam. To get this quantity at the rate of 250 tons per day for 300 days in the year will, it may be observed, occupy a period of about 27 years.
Nos. 1 and 2: THE TRUE BLUE AND NEWHAM BOTTOM COLLIERIES.—The grants which contain these collieries are 184 acres in extent, of which at least 100 acres remain unworked. The seam is 5 ft. 8 in. in thickness, and is free from partings, bittings, or troubles, and with the exception of the horse, which is of little practical importance, of any faults; the yield per square fathom is from 3 to 3½ tons. There are two drawing-pits of the respective depths of 50 and 45 yards now in use at these collieries, also two powerful steam-engines with boiler and the attendant machinery, more than adequate to the requirements of the work, together with all the necessary plant, including tram-wagons and pit tubs, drawing-tackle, landing stages, pit steining, rails, timbering of the main roads, &c., in the most efficient and perfect order. The coal yard, with loading bank, weighbridge, smiths' shop, storehouses, &c., is well arranged, both for sorting and dispatching coal. The collieries are, in a word, in full working order, and do not require any further outlay. At True Blue Pit, operations have not yet been carried further than driving out the roads, which, however, are already sufficiently advanced to turn stalls, when 30 tons per day may be raised; the yield, of course, progressively increasing as more stalls shall be turned. At Newham Bottom Pit the roads and stalls have been well devised for winning purposes, and from 60 to 70 tons per day are now being raised. Both pits are connected by well-laid tramways, with the main line to the Churchway Station on the South Wales and Great Western Railways, and are in the best possible maintenance. These collieries are held in perpetuity from the Crown, subject to the very low royalty of 2d. per ton.
No. 3: THE WOODSIDE COLLIERY.—This grant contains about 60 acres of unworked coal, from 4 to 6 feet thick, of the Coloford High Delf Vein. The coal is raised through two well-made pits. A substantial engine-house, with a superior 50-horse power steam-engine, and two 30-horse boilers, pumps, and all requisite shafting and gearing, foreman's dwelling house, carpenters' and smiths' shops, walled-in coal-yard, and other convenient buildings, the whole of which, with the necessary plant both under and above ground, consisting of tram-wagons, pit carts, rails, working tools, &c., are in good repair. The workings underground are extensive, and there are a sufficient number of stalls turned to raise 150 tons per day. A well-laid tramroad connects both pits with the main line to Churchway. This colliery is held under the Crown for 1000 years, from May 19, 1853, subject to a royalty of 2d. per ton.
No. 4: THE BIRCHEN GROVE COLLIERY.—This grant contains an entirely maiden coal field, and commands from 116 to 120 acres of untouched coal, of the High Delf vein, of the same quality and average thickness as the coal in True Blue and Newham Bottom; it adjoins those collieries on the west, and can be drained and worked most economically through the present workings in them, thus obviating the expense and delay of sinking a pit from the surface and erecting separate machinery. It is held under the Crown in perpetuity, subject to a royalty of 1½d. per ton.
A railway two miles in length has been laid from the collieries in connection with the Bulio Pill branch the South Wales and Great Western lines, thereby effecting an economical and important transit to the adjacent towns and villages, and by vessels from Bulio Pill Wharf, on the River Severn, to towns on the coast and to all parts of the Continent. The construction of the railway, with the erection of engines, sinking pits, the underground works, the purchase of plant, machinery, tools, &c., and the bringing the collieries to their present excellent working condition, has been accomplished at a cost exceeding £50,000 of actual outlay, judiciously expended.
Two hundred and fifty tons of coal a day may be immediately produced by the company, the cost of which delivered into the railway trucks at Churchway will be 4s. 4d. per ton, and the average selling price 5s. 6d. per ton, giving a net profit, after deducting every possible expense, of £7181 5s. per annum (as shown in the accompanying statement of profits), equal to an annual dividend of upwards of 20 per cent. on a capital of £35,000. The daily yield of coal will continually increase as more ground is opened in the several collieries. It is important to observe that this rate of profits is not derived from a calculation made on hypothetical estimates, but is the actual result of the present workings of the collieries.
In addition to the trade now attached to these collieries, all the further coal that can be raised will find a ready market at the ports of Gloucester, Lydney, and Bulio Pill, on the Severn; and as an inland trade at the various towns on the South Wales and Great Western Railway, including Cheltenham, Oxford, Reading, Windsor, Abingdon, Basingstoke, Brimscombe, Cirencester, Marlborough, Maidenhead, Newbury, Pangbourne, Swindon, Slough, Stroud, Stonehouse, Uxbridge, Wallingford, and Wycombe, to all of which places the coal from these collieries is regularly supplied.
The directors of this company have conditionally contracted for the acquisition of the coal in the foregoing properties with the railway and all the machinery, plant, &c., attached to the said collieries, at the price of £50,000, to be paid partly in money and partly in shares.
If it should appear that £5000 (reserving £5000 not proposed to be called up on the 40,000 shares of the company) is a small working capital, it must be remarked that the property acquired is not an undeveloped property, but on the contrary is producing a large yield of coal at present, and that capital is only required to continue a trade (already in operation) to the extent of producing 250 tons a day, for which purpose £5000 is amply sufficient.
Should it be deemed advisable to increase the capital, and extend the operations of the company, there are other coal fields in the neighbourhood which may be acquired, and which can only be profitably worked by the use of this company's railway and other appliances. It is right also to observe that the railway is in itself a real property, inasmuch as it has a right to tollage from all minerals passing over it, under the provisions of the Dean Forest Act.
No shareholder will incur any liability beyond the amount of shares allotted to him. The directors do not propose to proceed to carry out the objects in view until such an amount of capital as they are assured will justify the undertaking has been subscribed for.
Applications for shares must be made in the annexed form. Each applicant will be required to pay to the bankers of the company 2s. 6d. per share on the number of shares applied for, in exchange for which a receipt will be given, and to make a further payment of 15s. on such shares as shall be allotted to him. In the event of the directors allotting less than the whole number applied for, the amount paid in to the bankers will be applied towards the further payment of 15s. per share payable on the number allotted, but in case no allotment be made, the money so lodged will be forthwith returned in full.
Prospectuses, mining reports, forms of application for shares and of bankers' receipts for deposits may be had of Messrs. P. W. Thomas, Sons, and Co., Threadneedle-street, London, brokers to the company; of the solicitor; at the City Bank; or the offices of the company, 72, Old Broad-street, London, where plans of the properties may be seen and examined.

TRESAVAN MINE, GWENNAF.

POSITIVE AND UNRESERVED SALE OF STEAM ENGINE AND MINING MATERIALS.

MR. LITTLE is instructed to SELL, BY AUCTION, on the above mine, on Tuesday, the 14th day of December, at Eleven o'clock precisely, the following valuable ENGINES and MATERIALS:—
ONE 36 in. cylinder ENGINE, 6 ft. stroke, equal beam, with boiler 10 tons.
One 24 in. ditto, 9 ft. stroke, boiler 10 tons.
One 20 in. ditto, with crusher attached, boiler 9 tons.
One 20 in. ditto, with boiler 9 tons.
One 18 in. ditto, with boiler about 11 tons.
One 22 in. ditto, with boiler about 10 tons.
TWO excellent BOILERS, 12 tons each, with fire-doors, fire-bars, and dampers complete.
ONE WATER-WHEEL, 30 ft. diameter, 3 ft. breast.
One ditto, 28 ft. diameter, 18 in. breast, with saw-mill attached.
One ditto, 40 ft. diameter, 18 in. breast, and stamps with 12 hammers.
One ditto, 20 ft. diameter, 18 in. breast.
240 fms. of 14 in. capstan rope.
300 fms. of 9 in. cathead rope.
120 fms. of 7 ft. ditto.
200 fms. of 6½ in. flat rope.
Several lots of ½ in. and ¾ in. whim chain.
10 12 in. pumps, with Hand top doorpieces.
1 14 in. H. and top doorpiece.
2 12 in. plunger poles, with stuffing boxes and glands to match.
3 cast-iron balance bolts, with gudgeons, troughs, and brasses to fit.
Several sets of bolsters of different sizes.
Sundry pairs of yokes.
Staples and glands.
Sundry lots of 6 and 7 in. rod plates.
Several tons of useful wrought-iron.
The attention of purchasers is respectfully solicited, as the whole of the above will be sold without reserve.—For further particulars, apply to the agents on the mine, or at the offices of the auctioneer, Redruth.—Dated Redruth, Nov. 30, 1858.

Scrap iron and cast-iron.
Whim chains of different sizes.
Whim shaves of different sizes.
200 fms. of iron stave ladders.
Several lots of useful timber.
2 smiths' bellows.
3 anvils, 2 vices, smiths and miners' tools.
Cast-steel, pick and shovel hilt.
New and old lead.
Scales, beams, and weights.
5 tram wagons.
Several lots of tram-road iron.
Machine and winch kibbles.
Horse whins and shaft tackle.
And sundry useful materials.

VALUABLE MACHINERY AND MINE MATERIALS FOR SALE.
MR. BAKER has been favoured with instructions to SELL, BY PUBLIC AUCTION, at VENTON MINE, in the parish of Menhenot, on Friday, the 17th day of Dec., 1858, the whole of the MACHINERY and MINE MATERIALS on the above mine, viz:—

ONE superior 50 in. cylinder PUMPING ENGINE, equal beam, 10 ft. stroke, first piece of main rod attached, slide plates, and faggotted caps. One 10 ton boiler.
ONE 25 in. PUMPING ENGINE, 7 ft. stroke in the cylinder, and 6 ft. in the shaft, with a very powerful whim cage, fly wheel, iron shaft sockets, &c., complete.
19 9 ft. 14 in. pumps.
1 6 ft. ditto.
1 14 in. plunger pole, stuffing box and gland, and plunger bottom, complete.
1 ½ ft. 13 in. matching.
1 12 in. ditto.
14 9 ft. 12 in. pumps.
1 6 ft. 9 in. ditto, and 2 9 in. matchings.
2 10 ft. 11 in. ditto.
2 6 ft. 12 in. pumps.
1 2 ft. 12 in. matching.
1 9 ft. 12 in. flat bottomed windhorse.
1 6 ft. 12 in. ditto.
1 5 ft. 11 in. ditto.
1 10 in. plunger pole, stuffing box and gland, and plunger bottom, complete.
11 9 ft. 9 in. pumps.
1 6 ft. 9 in. ditto, and 2 9 in. matchings.
2 4 ft. 12 in. doorpieces and doors.
1 8 arm capstan, with oak axle.
Shears and shives.
80 fms. 11 in. capstan rope.
Horse whin, puppet heads, and shives.
2 pieces of 12 in. pine rods.
3 ditto 7 in. ditto.
Rod plates, caps, and pins.
And a variety of OTHER MATERIALS and EFFECTS in general use in mines.
The sale will commence at Ten o'clock, and a punctual attendance is desired, as the lots are numerous. The mine is conveniently situated, about two and a half miles from Liskeard, adjoining the Callington turnpike road.
For viewing the same application may be made to, and further particulars obtained of, Capt. RICHARDS, Liskeard; to the auctioneer; or to J. WATSON, Esq., 13, George-yard, Lombard-street, London.—Well Town, Liskeard, November 29, 1858.

THE KAPUNDA COPPER MINING COMPANY, AUSTRALIA.

ONE THOUSAND THREE HUNDRED AND TWENTY EIGHT SHARES (£1 PAID) IN THIS IMPORTANT UNDERTAKING.
MESSRS. GADSDEN, WINTERFLOOD, AND ELLIS have received instructions to SELL, BY AUCTION, at the Mart, on Tuesday, the 21st December, 1858, at Twelve o'clock, Lots, the above valuable SHARES.—Particulars may be obtained of JAMES D. KENNEDY, Esq., 11, Broad-street, buildings, at the Mart; and at Messrs. GADSDEN, WINTERFLOOD, and ELLIS's offices, 18, Old Broad-street, City.

RESPIRYN MINE, IN ST. WINNE, COUNTY OF CORNWALL.

TO BE SOLD, BY AUCTION, on Saturday, the 18th December, 1858, at One o'clock precisely, at Channon's London Hotel, Liskeard (subject to such conditions as will be produced at the time of sale), the LEASES, MACHINERY, MATERIALS, ORES, &c., of RESPIRYN MINE, in One Lot.
The whole may be viewed on application to Capt. TREAGT, on the mine, and further particulars may be known by applying to the pursuer, Mr. HENRY WILLS, 17½ George-street, Plymouth.

TO BE SOLD, A VERY VALUABLE MANGANESE AND COPPER MINE.

Also, FOUR HUNDRED TONS OF MANGANESE of good quality ready for market.—Apply to the proprietor, Captain THOMAS TONKIN, Glendore Leap, county Cork, Ireland.

TO BE SOLD, ALL OR PART OF THAT VALUABLE COPPER MINE,

known by the name of the BRYNANLECH COPPER MINE, situated in the parish of Llanfair Talhaiarn, near Abergele, North Wales. This mine is in a first-rate working order, and producing a quantity of ore.—Application to be made to Mr. JONAS DAVIES, at the mine, who will give full particulars.

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FOR SALE, BY PRIVATE CONTRACT

THE ISLAND OF KAWAU.
Affording an opportunity to the landed proprietor rarely met with.
Kawau, which contains about 5000 acres, is of freehold tenure, and situated on the east coast of the Northern Island of New Zealand. It is distant some 30 miles to the northward of Auckland (the capital) and two miles from the mainland, and forms one of the principal landing points for vessels entering the Hauraki Gulf, or Frith of the Thames.
The strait between it and the main land affords safe anchorage and favourable navigation for boats and small vessels, and the extensive natural harbour of Ron Accord, which runs about two miles into the centre of the island, is of sufficient depth and safety to shelter a considerable fleet of vessels.
The island contains copper, and mining was formerly carried on to a considerable extent. There are numerous bays and inlets in the island, surrounded with luxuriant vegetation, supporting a large number of wild and tame cattle.
Further particulars may be had, and offers in writing will be received, at the offices of the North British Australasian Company (Limited), to whom the property belongs. A royalty will be reserved on all minerals which may be found on the property.
By order, DAVID BUDGE, Sec.
27, New Broad-street, London, E.C., September 16, 1858.

STEAM ENGINE FOR SALE.—A 24 inch ROTARY

CONDENSING HORIZONTAL STEAM ENGINE FOR SALE, 6 ft. stroke in cylinder, heavy fly-wheel, drawing machine attached, and connection for pumping, with a 9 ton Cornish boiler, the whole in good condition.—Particulars may be had by applying to Messrs. NICHOLLS, WILLIAMS, and Co., engineers, Tavistock.

Messrs. NICHOLLS, WILLIAMS, and Co. have always a good supply of SECOND-HAND MINE MATERIALS FOR SALE. Orders executed for new machinery and materials at the shortest notice, and of best quality. Machinery sent to all parts of the world, and able engineers to erect it.

STEAM ENGINES FOR SALE.—TO BE DISPOSED OF,

a very superior HIGH-PRESSURE HORIZONTAL ENGINE, of 19 horse power, 14 in. cylinder, and length of stroke 2 ft. And ONE 38 horse power, 20 in. cylinder, and length of stroke 3 ft.—For further particulars, and terms, apply to Messrs. PAGE and CAMERON, land agents and surveyors, 64, Old Broad-street, London, E.C., and St. Alban's.

STEAM ENGINE FOR SALE.—Now ready for delivery, a FIRST

CLASS HORIZONTAL HIGH PRESSURE STEAM ENGINE (new), 24 inch cylinder, 4 feet stroke, equilibrium side piston valve, wrought shaft and crank, specially fitted out for winding, but equally well adapted for other purposes.—May be viewed at Messrs. R. and J. COPE's engine manufactory, Wigan.

STEAM ENGINE FOR SALE.—One new 14 horse power HIGH

PRESSURE HORIZONTAL STEAM ENGINE, 14 in. cylinder and 2 ft. stroke, polished.—May be viewed at Messrs. R. and J. COPE's engine manufactory, Wigan.

FOR SALE, A 24 in. WHIM HORIZONTAL ENGINE, with a

10 tons boiler, nearly new, in excellent condition, and drawing machine attached. As this engine is very superior in make and condition, parties requiring one will do well to examine it.—Apply to Mr. C. WISDOM, 21, Southemhay, Exeter.

TO CAPITALISTS DESIROUS OF A SAFE INVESTMENT.—

TO BE SOLD, OR LET, the valuable and extensive COAL and CULM MINES of DROMENAGH, situated within six miles of the Kanturk and Millstreet stations of the Killarney Junction Railway, in the barony of Duhallo and county of Cork. The culm for which there is a very great demand, is of the most superior quality, and its supply is more than sufficient to last for centuries. Labour is abundant and cheap, and a highly profitable and remunerative trade may be carried on at a moderate outlay.—Particulars as to terms and price may be obtained by application to DENNIS MCCARTHY, Esq., Rathree, Millstreet; or MICHAEL CAGLIACI, solicitor, 7, Middle Gardner-street, Dublin, and 62, Grand Parade, Cork.

ANTHRACITE COAL, PEMBROKESHIRE.—TO BE LET, for

a term of years, all the VALUABLE VEINS of ANTHRACITE COAL lying under the farm of Cresswell, in the parish of Lawrenny, in the above county, containing upwards of 300 acres, and comprising several veins of very superior coal and culm. The above is very conveniently situated, on the banks of the Milford Haven, and enjoys considerable facilities for shipment.—For further particulars, apply to T. L. MARRIOTT, Esq., 1, Lancaster-place, Waterloo-bridge, London; and to Mr. JAMES WILSON, mineral surveyor, Underwood, near Haverfordwest.—Underwood, Nov. 12, 1858.

FURNACES IN ENGLAND, IRELAND, SCOTLAND, AND

ELSEWHERE (LAND OR MARINE), MADE TO PREVENT SMOKE AND ECONOMISE COAL, &c., by the PATENT REGULATING AIR-DOORS, delivered in London at £12 12s. each. ENTIRE COST COVERED BY SAVING OF FUEL IN A FEW MONTHS. The patentees will feel much obliged for information of any infringement of their right, by fraudulent imitation or otherwise.
J. LEE STEVENS, 1, Fish-street-hill, London, E.C.

STEAM PUMPS, FOR LAND AND MARINE PURPOSES.

SINGLE or DOUBLE ACTING, sizes from 2½ to 12 in. diameter, and from 4 to 18 in. stroke; by JOHN CAMERON. Used for feeding boilers, raising water (for reservoirs, tanks, irrigation, &c.), turning power, or as a steam fire engine.
Works, Egerton-street, Hulme, Manchester.

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on an extensive scale that their PATENT SOLID BRICK MACHINE is now THOROUGHLY and EFFICIENTLY TESTED, and are prepared to OFFER the following counties to the trade, in districts, either by ROYALTY or PURCHASE:—Middlesex, Surrey, Sussex, Essex, Kent, Norfolk, Suffolk, Cambridge, Oxford, Gloucester, Hertford, Berks, Bucks, Huntingdon, Devon, Cornwall, Dorset, Wilts, Hants, and Isle of Wight.

With this PATENT MACHINE the ordinary surface clay requires no preparation whatever, whilst that of a rocky nature has merely to be passed through rollers in the usual way, and THENCE, WITHOUT ANY TEMPERING, INTO THE MACHINE, FROM WHICH THE BRICKS ARE REMOVED DIRECT TO THE KILN IN A STATE READY FOR BURNING. THE MACHINE is now making UPWARDS OF THIRTY BRICKS PER MINUTE at the works of Messrs. KIRK and PARRY, Government contractors, Fort Eison, near Gosport; and also at the Patent Solid Brick Works of T. WELLS INGRAM, Oldbury, near Birmingham. Application for orders to see the machine in operation to be made to Messrs. OATES and INGRAM, Bradford-street, Birmingham. Samples of clay may be sent and passed through the machine, and the bricks burnt, or a sample brick will be sent to any party wishing to see one.

CORNISH CRUCIBLES.—JOHN JULEFF, CORNISH

CRUCIBLE MAKER, FORT-STREET, REDRUTH, CORNWALL (late No. 5, Buller's-row). JEWELLERS, SILVERSMITHS, METALLURGISTS, and ASSAYERS' CRUCIBLES OF ALL SIZES. BLACK LEAD POTS, COVERS, MUFFLES, CUPELS, &c., OF EVERY DESCRIPTION, AND MADE TO ORDER.

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Messrs. ADAM, BROTHERS, AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, propose to SUPPLY and ERECT these WHEELS on any height of fall, and for driving any kind of machinery. They have been engaged in making them for the last ten years, and have erected them in many parts of Ireland, and latterly at the Laxey Lead Mines, Isle of Man, and at Eggleston Mills, near Barnard Castle. They give a much higher percentage of power than the best vertical water-wheels, are cheaply connected to other machinery, and on low falls are not affected by floods or back-water. Further particulars will be given on application.

PATENT LEVER BREAK, FOR RAILWAY WAGONS,

doing away with the objectionable break rack. Can be APPLIED to EXISTING STOCK at a TRIFLING EXPENSE. Royalty moderate. Models can be seen at 34, Great George-street, Westminster; and the breaks in action at the works of the Railway Carriage Company; at the Peterboro' Station, on the Eastern Counties Railway; the Rugby Station, London and North-Western Railway; the Cardiff Docks Station, Taff Vale Railway; and at the Works, Oldbury, near Birmingham, where all communications are requested to be sent.

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Our BANDS, carefully MANUFACTURED from the VERY BEST GUTTA PERCHA only, are considerably CHEAPER, and, when fairly worked, are far more DURABLE than LEATHER. Can be had in lengths of 100 or 120 feet without a joint, are easily joined or repaired, and are, when worn out, re-purchased by us at about one-third of their original cost. In the event of a break down, a band of any size can be supplied within a few hours of receipt of order. The present prices are as under:—
Bands ½ in. thick and upwards to ½ in. ... 2s. 2d. per lb.
Bands above ½ in. thick 3s. 4d. per lb.
Subject to a liberal discount for cash, varying according to quantity. TUBING and other articles equally low. All our patented manufactures are to be obtained wholesale from our own works; retail from any of our dealers.

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Forwarding Passengers by Steam to various Ports in AUSTRALIA AND TASMANIA.

Ship.	Register.	Captain.	Date.
LIGHTNING	2090	BYRNE	5th January.
MARCO POLO	1625	CLARK	5th February.
COMMODORE PERRY	2242	WEBB	5th March.
DONALD MCKAY	2694	TOWIN	5th April.
CHAMPION OF THE SEAS	2480	MCKINLEY	5th June.
GREAT TASMANIA	2140	GARDYNE	5th June.

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Ship.	Captain.	Register.	Burthen.	To sail.
BEECHWORTH	FRAN	1296	4000	Dec. 21.
PRINCE OF THE SEAS	BROWN	1427	4500	Jan. 20.
RED JACKET	M. H. O'HALLORAN	2469	5000	—
WHITE STAR	T. C. C. KERR	2360	5000	—
MERMAID	J. WHITE	1320	4000	—

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Passengers must embark, without fail, on the 20th December.
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12 Table Spoons, best quality	1 16 0 <td>2 14 0<td>3 0 0<td>4 12 0</td></td></td>	2 14 0 <td>3 0 0<td>4 12 0</td></td>	3 0 0 <td>4 12 0</td>	4 12 0
12 Dessert Forks, best quality	1 7 0	2 0 0	2 4 0	2 14 0
12 Dessert Spoons, best quality	1 7 0	2 0 0	2 4 0	2 14 0
12 Tea Spoons, best quality	0 16 0	1 4 0	1 7 0	1 16 0
2 Sauce Ladles, best quality	0 8 0	0 10 0	0 11 0	0 13 0
1 Gravy Spoon, best quality	0 7 0	0 10 0	0 11 0	0 13 0
4 Salt Spoons (gilt bowls), best quality	0 6 8	0 10 0	0 12 0	0 14 0
1 Mustard Spoon, best quality	1 8 0	0 2 0	0 3 0	0 3 6
1 Pair Sugar Tongs, best quality	0 3 6	0 5 6	0 6 0	0 7 0
1 Pair Fish Carvers, best quality	1 0 0	1 10 0	1 14 0	1 18 0
1 Butter Knife, best quality	0 3 0	0 3 0	0 6 0	0 7 0
1 Soup Ladle, best quality	0 12 0	0 16 0	0 17 0	1 0 0
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THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Nom. Pr.	Bus. done.	Last Call.
5120	Alfred Conso (cop.), Phillack [S.E.]	2 11 0	8	8 1/2	Oct. 1858
10000	Bampfylde (copper), Devon	0 12 6	4	4	Oct. 1858
4000	Barnard United (copper), Tavistock	2 6 8	4	4	Oct. 1858
240	Boscawen (tin), St. Just	20 10 0	87 1/2	87 1/2	Oct. 1858
280	Boulack (tin, copper), St. Just	5 0 0	205	205	Oct. 1858
4096	Calstock Conso (copper)	5 0 0	4 1/2	4 1/2	Oct. 1858
1000	Carn Breca (copper), Illogan	15 0 0	62 1/2	60 62 1/2	Oct. 1858
200	Carn Cwm Brywyn (lead), Cardiganshire	35 0 0	37	37	Oct. 1858
2000	Collicumbie (copper), Lamerston	5 0 0	12 1/2	12 1/2	Oct. 1858
12000	Copper Miners of England	25 0 0	26	26	Oct. 1858
300000	Ditto (stock)	100 0 0	26	24 25	Oct. 1858
1055	Craddock Moor (copper), St. Cleer	8 0 0	30	28 30	Oct. 1858
867	Cwm Erwin (lead), Cardiganshire	7 10 0	14	14	Oct. 1858
128	Cwm-y-warth (lead), Cardiganshire	60 0 0	300	300	Oct. 1858
4026	Devon and Cornwall (copper)	4 6 3	9	9	Oct. 1858
1240	Devon G. Con. (cop.), Tavistock [S.E.]	1 0 0	460	450 460	Oct. 1858
328	Dolowath (copper, tin), Camborne	128 17 0	230	225 230	Oct. 1858
300	East Darnley (lead), Cardiganshire	32 0 0	110	110	Oct. 1858
2048	East Falmouth (copper), Gwennap	2 0 0	3	3	Oct. 1858
128	East Pool (tin, copper), Pool, Illogan	24 5 0	175	175	Oct. 1858
5700	Exmouth (silver-lead), Christow	4 14 0	8	8	Oct. 1858
1460	Evam Mining Co. (lead), Derbyshire	5 0 0	38	38	Oct. 1858
243	Graham and St. Angharad (cop.) [S.E.]	100 10 0	135	130 135	Oct. 1858
6000	Great South Toluca [S.E.] Redruth	0 14 0	14	13 1/2 14	Oct. 1858
1024	Herodotus (lead), near Liskeard	8 10 0	42	42 1/2 42	Oct. 1858
2560	Isle of Man, Limited (lead)	25 0 0	42	42	Oct. 1858
100	Levant (copper, tin), St. Just	2 10 0	105	100 105	Oct. 1858
400	Lisburne (lead), Cardiganshire, Wales	18 15 0	100	100	Oct. 1858
5000	Mendip Hills (lead), Somerset	3 15 0	14	14	Oct. 1858
1800	Miners Mining Co., Ltd. (ld), Wrexham	25 0 0	110 1/2	110 1/2	Oct. 1858
20000	Miners of Ireland (cop., lead, coal)	7 0 0	135	135	Oct. 1858
470	Newtownards Mining Co., Co. Down	60 0 0	25	25	Oct. 1858
6000	N. Wh. Bassett (cop., tin), Illogan [S.E.]	1 2 6	7 1/2	8 8 1/2	Oct. 1858
6400	Par Conso (cop.), St. Blazey [S.E.]	1 2 6	17 1/2	16 1/2 17	Oct. 1858
200	Phoenix (copper, tin), Linkingstone	100 0 0	425	415 425	Oct. 1858
1000	Polverto (tin), St. Agnes (Preferential)	15 0 0	5	5	Oct. 1858
1772	ditto (ditto)	15 0 0	5	5	Oct. 1858
560	Providence (tin), Uny Lelant [S.E.]	20 13 2	65	64 66	Oct. 1858
2500	Rhoswyl and Bacheland (lead)	11 5 0	12	12	Oct. 1858
15000	Ruadgarth Colliery Company, Limited	0 5 0	3	3	Oct. 1858
256	South Carnon (cop.), St. Cleer [S.E.]	2 10 0	420	405 410	Oct. 1858
256	South Carnon (cop.), St. Cleer [S.E.]	2 10 0	420	405 410	Oct. 1858
512	South Toluca (cop.), Redruth, Cornwall	8 0 0	80	78 80	Oct. 1858
496	South Wheal Franches, Illogan [S.E.]	18 18 9	245	230 240	Oct. 1858
20000	St. Day United (tin and copper)	2 0 0	125	125	Oct. 1858
476	St. Ives Conso (tin), St. Ives	16 0 0	34	30 35	Oct. 1858
6000	Tincroft (cop., tin), Pool, Illogan [S.E.]	9 0 0	43 1/2	43 1/2 43 1/2	Oct. 1858
20000	Valley of Towry (lead), Carnarvon	0 12 6	135	135	Oct. 1858
512	Wendron Conso (tin), Wendron	23 7 8	43	43	Oct. 1858
6000	West Bassett (copper), Illogan [S.E.]	1 10 0	22 1/2	24 1/2	Oct. 1858
256	West Carnon (cop.), Liskeard [S.E.]	20 0 0	130	125 135	Oct. 1858
6400	West Fowey Conso (tin and copper)	7 0 0	6 1/2	6 1/2	Oct. 1858
400	West Wheal Seton (cop.), Camborne	38 10 0	295	295 300	Oct. 1858
240	Wheal Ball (tin), St. Just	15 0 0	18	18	Oct. 1858
512	Wheal Bassett (copper), Illogan [S.E.]	5 9 6	225	210 215	Oct. 1858
256	Wheal Buller (cop.), Redruth [S.E.]	5 0 0	180	140 160	Oct. 1858
4096	Wheal Edward (cop.), Calstock [S.E.]	5 10 0	2 1/2	2 1/2 2 1/2	Oct. 1858
128	Wheal Friendship (copper), Devon	50 0 0	80	80	Oct. 1858
448	Wh. Margaret (tin), Uny Lelant [S.E.]	19 15 0	62 1/2	60 62 1/2	Oct. 1858
1024	Wh. Mary Ann (ld.), Menheniot [S.E.]	8 15 0	47 1/2	46 1/2 47	Oct. 1858
80	Wheal Owles, St. Just, Cornwall	70 0 0	300	300	Oct. 1858
1040	Wh. Trevelyan (sil.-ld.), Liskeard [S.E.]	4 10 0	28 1/2	28 1/2 28 1/2	Oct. 1858
4096	Wheal Wrey (lead), St. Ives	1 14 0	2	2 1/2 2 1/2	Oct. 1858
4000	Wicklow (copper), Wicklow	5 0 0	38 1/2	38 1/2	Oct. 1858

MINES WITH DIVIDENDS IN ABEYANCE.

1224	Ballewidden (tin), St. Just	11 5 0	5	5	Oct. 1858
1200	Brightside & Froggatt Grove, Derbyshire	3 0 0	3 1/2	3 1/2	Oct. 1858
100	Brynmall (lead), Flintshire	25 0 0	50	50	Oct. 1858
1000	Brynmall, Llandiloes, Montgomeryshire	5 0 0	11	10 1/2 11 1/2	Oct. 1858
300	Budnick Conso (tin), Parnan	2 2 6	5 1/2	5 1/2	Oct. 1858
6000	Burwick (silver-lead), Cardiganshire	3 6 8	1 1/2	1 1/2	Oct. 1858
2048	Carnyort (tin), St. Agnes	15 0 0	47 1/2	44 1/2	Oct. 1858
256	Candarrow (cop.), Camborne	20 0 0	53	53	Oct. 1858
30000	Craven Moor, Limited (lead), Yorkshire	0 10 0	10	10	Oct. 1858
280	Derwent Mines (sil.-lead), Durham	300 0 0	150	150	Oct. 1858
672	Ding Dong (tin), Gwilt	35 0 0	11	10 11	Oct. 1858
12000	Drake Walls (tin, copper), Calstock	2 10 0	1	1 1/2	Oct. 1858
1024	East Wheal Margaret (tin, copper)	7 17 6	2	2	Oct. 1858
4940	Fowey Conso (copper), Tywardreath	4 0 0	5 1/2	5 1/2	Oct. 1858
4448	General Mining Co. for Ireland (cop., ld.)	0 0 0	13 1/2	13 1/2	Oct. 1858
240	Gottman (lead), Cardiganshire	12 0 0	2 1/2	2 1/2	Oct. 1858
1024	Gonamena (copper), St. Cleer	14 5 0	8 1/2	8 1/2	Oct. 1858
26668	Gr. Wh. Vor (tin, cop.), Helston [S.E.]	8 17 6	8 1/2	8 1/2	Oct. 1858
119	Great Work (tin), Gernoe	100 0 0	110	110	Oct. 1858
6000	Hingston Down Conso (cop.), Calstock	3 15 0	4 1/2	3 3 1/2	Oct. 1858
2000	Holyford (copper), near Tappin	11 0 0	8 1/2	8 1/2	Oct. 1858
200	Laxey Mining Company, Isle of Man	100 0 0	1000	1000	Oct. 1858
5000	Lewis Mines (tin, copper), St. Erth	6 9 11	2 1/2	2 1/2	Oct. 1858
5000	Marke Valley (copper), Cardon	4 10 6	2 1/2	2 1/2 2 1/2	Oct. 1858
4000	Merilyn (tin), Flint	2 0 0	2 1/2	2 1/2	Oct. 1858
5000	Nanteco & Penrhyn, Ltd. (2 1/2% share)	2 5 0	1 1/2	1 1/2 1 1/2	Oct. 1858
200	North Pool (copper, tin), Pool	40 18 0	5 1/2	5 1/2	Oct. 1858
700	North Roskear (copper), Camborne	13 0 0	20 1/2	21 22 1/2	Oct. 1858
512	Rosewarne United (cop., tin), Gwennap	15 0 0	32 1/2	32 1/2	Oct. 1858
12000	Sordridge Con. (cop.), Whitechurch [S.E.]	0 6 0	15 1/2	15 1/2	Oct. 1858
128	South Cribin (copper), St. Austell	19 0 0	285	285	Oct. 1858
794	Spearcon (tin), St. Just, Cornwall	3 18 0	2 1/2	2 1/2	Oct. 1858
280	Spearcon Moor (copper), St. Just	23 7 8	15	15	Oct. 1858
570	St. Aubyn and Gwilt (tin), Breage	6 4 0	2 1/2	2 1/2	Oct. 1858
9600	Tancon (sil.-ld.), Beeralston [S.E.]	4 10 0	7 1/2	7 1/2	Oct. 1858
512	Trevelyan Conso (tin), St. Ives	11 10 0	18 1/2	18 1/2	Oct. 1858
120	Trevelyan (tin), Gwennap, Cornwall	15 10 0	18 1/2	18 1/2	Oct. 1858
4096	Trevelyan (sil.-ld.), Menheniot, Cornwall	2 18 0	5 1/2	5 1/2 5 1/2	Oct. 1858
100	Trumpet Conso (tin), near Helston	95 0 0	11	11	Oct. 1858
1000	United Mines (copper), Gwennap	40 0 0	85	100	Oct. 1858
512	West Basset (copper), Gwennap	12 17 0	11 1/2	11 1/2	Oct. 1858
1024	West Providence (tin), St. Erth	2 11 7 1/2	1 1/2	1 1/2	Oct. 1858
6140	Wheal Arthur (copper), Calstock	2 10 0	17 1/2	17 1/2	Oct. 1858
1024	Wheal Charlotte, Parnan	6 3 4	10 1/2	10 1/2	Oct. 1858
250	Wheal Clifford (copper), Gwennap	3 10 0	25	25	Oct. 1858
512	Wheal Jane (silver-lead), Kea	3 10 0	25	25	Oct. 1858
5000	Wheal Kitty (tin), St. Agnes	4 10 0	3 1/2	3 1/2 3 1/2	Oct. 1858
1024	Wheal Kitty (tin), Uny Lelant [S.E.]	1 7 2	9	7 1/2 8	Oct. 1858
430	Wheal Lovell (tin), Wendron	33 0 0	7	7	Oct. 1858
100	Wheal Mary (tin) Lelant	36 3 0	230	275	Oct. 1858
240	Wheal Reeth (tin), Uny Lelant	39 10 0	25	20 22	Oct. 1858
198	Wheal Seton (tin, copper), Camborne	107 0 0	230	230	Oct. 1858
1024	Wheal Trevelyan (tin, cop.), Gwennap	12 2 6	2 1/2	2 1/2	Oct. 1858

* Dividends paid every two months. † Dividends paid every three months.

FOREIGN MINES.

2464	Burra Burra (cop.), South Australia	5 0 0	142	139 x d	Oct. 1858
12000	Cobra Copper Co. (cop.), Cuba [S.E.]	40 0 0	37	38 40	Oct. 1858
10000	Copland (copper), Flintshire	16 0 0	13	13	Oct. 1858
20000	English and Australian [S.E.]	5 0 0	1 1/2	1 1/2	Oct. 1858
25000	Gen. Mining Assoc., Nova Scotia [S.E.]	20 0 0	21	20 21	Oct. 1858
15000	Linares (ld.), Pozo Ancho, Spain [S.E.]	3 0 0	9 1/2	9 1/2	Oct. 1858
10000	Lustaniano (of Portugal) [S.E.]	1 15 0	1 dis.	1 1/2 dis.	Oct. 1858
10815	Marquita and New Granada [S.E.]	1 0 0	1	1	Oct. 1858

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Altan & Quannagen Unl. (cop.), Norw.	16 10 0	3	3	Oct. 1858
8876	North British Australian [S.E.]	1 0 0	3 1/2	3 1/2	Oct. 1858
10000	Pontgarth (sil.-lead), France [S.E.]	20 0 0	5 1/2	4 1/2 5 1/2	Oct. 1858
7000	Royal Santiago (copper), Cuba [S.E.]	16 15 0	1 1/2	1 1/2	Oct. 1858
11000	St. John del Rey [L.], Brazil [S.E.]	15 0 0	9	9 11	Oct. 1858
43174	Unit. Mexican (sil.-ld.), Mexico [S.E.]	28 5 0	3 1/2	2 1/2 3 1/2	Oct. 1858

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Nom.	Pr.	Bus.	done.	Last Call.
20000	Acadian Charcoal Iron, Nova Scotia [L.]	8 10 0	6	6			Nov. 1858
20000	Australian (copper) [S.E.]	7 5 0	3	3	3/4	3/4	
75000	Bon Accord, South Australia (copper) [L.] [S.E.]	0 10 0	1	1	1/2	1/2	
10000	Brazilian Imperial [S.E.]	27 5 0	1 1/2	1 1/2	2	2	
10000	Brazilian Land and Mining, Altoqueque [L.] [S.E.]	5 0 0	2	1 1/2	2 1/2	2 1/2	
6000	Central American (silver) [L.]	7 0 0	2 1/2	2 1/2			April, 1859
50000	Clarendon Consols (copper), Jamaica [S.E.]	0 12 6	4 1/2	4 1/2			Oct. 1859
50040	Cologne Mining Company (lead), Rhensish Prussia	1 4 0	1 1/2	1 1/2			June, 1859
10000	Copland Smelting [L.]	10 0 0	13	13			
75000	Dun Mountain (copper), New Zealand [S.E.]	10 0 0	1 1/2	1 1/2	3/4	3/4	
15000	East Indian Coal, Calcutta [L.]	10 0 0	10	10			
20000	Ellerslie and Bardowie, Jamaica	0 16 0	1 1/2	1 1/2			
8000	English and Canadian Mining Company Limited, Quebec	3 15 0	1 1/2	1 1/2			
2000	English Ridge (copper), Newfoundland [L.]	0 10 0	5	5			
25000	Fortuna (lead), Spain [S.E.]	2 0 0	1 1/2	1 1/2	1 1/2	1 1/2	July, 1859
10000	Great Barrier Land, Mining, &c., New Zealand	1 10 0	1 1/2	1 1/2			
2500	Kinzhalitz Mininz Association, Germ.	4 0 0	1	1			
25000	Levant Mineral [L.]	10 0 0	1	1			
80000	Mount Carbon (copper), Virginia	1 0 0	1 1/2	1 1/2			
60000	New Granada (gold) [S.E.]	1 0 0	1 1/2	1 1/2	3/4	3/4	
10000	New Grand Duchy of Baden (silver-lead)	0 15 0	2 1/2	2 1/2			
50000	Newfoundland Mining Association [L.]	0 20 0	3 1/2	3 1/2			Nov. 1859
60000	North Rhine Copper of South Australia, Limited [S.E.]	0 10 0	16 3/4	16 3/4	16 3/4	16 3/4	
100000	Nouveau Monde (copper)	1 0 0	1 1/2	1 1/2			
100000	Port Phillip (gold), Clunes [S.E.]	1 0 0	1 1/2	1 1/2	3/4	3/4	
50000	Quartz Reduction [L.]	1 0 0	1 1/2	1 1/2			
6000	Rosie and Canada (lead)	9 0 0	1 1/2	1 1/2			Nov. 1859
55415	Strathgairn (copper) [L.]	9 0 0	1 1/2	1 1/2			
2000	Turk's Head (copper), New Canada, Limited	0 10 0	5	5			
20000	Wellington Copper Mine Company, West Canada, Limited	1 0 0	1	1			
1000	Western Africa Malachite	05 0 0	100	100			Aug. 1859
35425	Wheal Jamaica (copper)	0 17 0	18 1/2	18 1/2			
75000	Wilber (silver-lead, copper)	2 0 0	1 1/2	1 1/2			
100000	Worthing (copper), South Australia [L.]	0 14 0	16 3/4	16 3/4	16 3/4	16 3/4	June, 1860